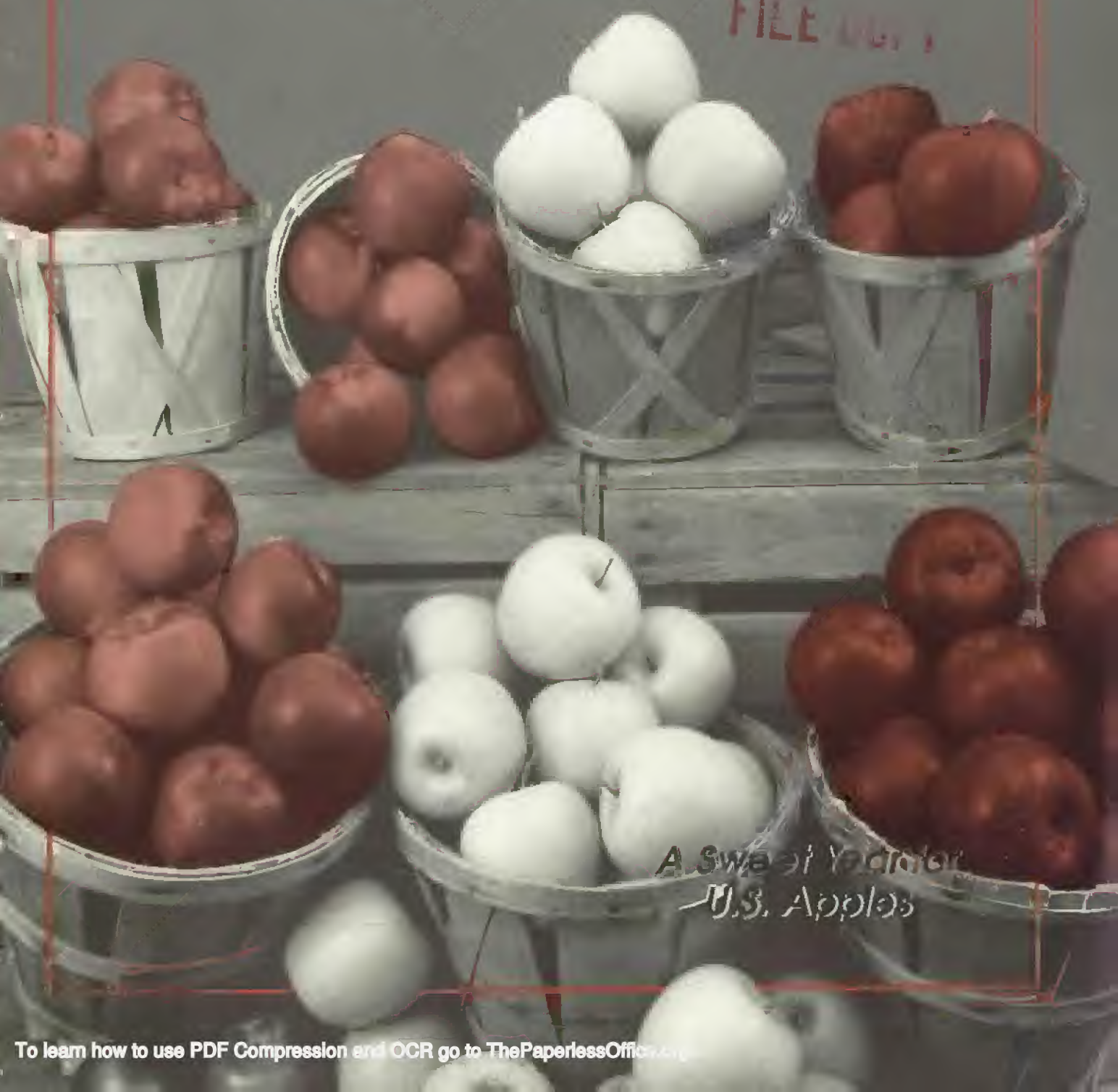


AGRICULTURAL OUTLOOK

Economic Research Service
United States Department of Agriculture

July 1992



FILE COPY

*A Sweet Tradition
U.S. Apples*

July 1992/AO-187

AGRICULTURAL OUTLOOK



Cover Photo:
Empire apples (left),
Golden Delicious, Red
Delicious

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News of the U.S. Apple Industry, Food Prices, U.S. and EC Farm Policy, and World Grain Markets

World supplies of wheat and coarse grains are projected to increase nearly 2 percent in 1992/93. But weak economic growth prospects for some key players will hold down increases in global use and trade. U.S. producers face keen competition in global grain trade, with expectations of a much reduced role for the former Soviet Union. Import demand by the former Soviet Union for both wheat and coarse grains is projected to contract by a third, contributing to smaller global markets.

U.S. apple growers are polishing off the 1991/92 marketing year with record-setting prices for fresh apples every month since last September, with healthy export demand aided by a short European crop. Topping 1991's performance will be a challenge, but retail promotion efforts are helping maintain apples' share of the consumer fruit basket, and strong export demand is likely to continue into the next marketing year.

Apples are among the high-value products (HVP's) that are boosting the forecast value of U.S. agricultural exports in fiscal 1992 to their second-highest level. Exports of HVP's—those that receive additional processing beyond the farm gate—have been aided in the last decade by favorable U.S. exchange rates, relatively strong growth in many developed countries, market promotion, and trade liberalization.

The strong position of HVP's is part of a transformation in the U.S. export picture since the peak sales year of 1981. Europe, for example, is no longer the major market for U.S. agricultural exports, and sales of principal bulk products like grains and oilseeds comprise a smaller share of the export mix. Higher HVP exports sustained the total value of U.S. agricultural exports to developed countries, offsetting reduced bulk exports to the EC. Higher HVP shipments are expected to drive U.S. sales to developed countries above \$20 billion in fiscal 1992, surpassing even 1981's record.



Changing conditions in international markets are among the developments highlighting the need for agricultural policies that allow producers to respond to changing market conditions. Farm program provisions of the Food Security Act of 1985, as well as the Food, Agriculture, Conservation, and Trade Act of 1990 (1990 farm act) and the Omnibus Budget Reconciliation Act of 1990 have set U.S. agriculture on a more market-oriented path.

A significant departure from earlier farm legislation, the planting flexibility provisions in the 1990 farm act allow farm program participants to plant alternative permitted crops on up to 25 percent of the base acreage of their program crops. With this flexibility, planting decisions on this acreage are more likely to be based on market signals.

On May 27, USDA released its preliminary enrollment figures for 1992 programs, including producers' indications of how these "flex acres" will be used.

The report indicates that altogether, participating farmers will flex 8.3 million acres in 1992, or about 20 percent of their estimated maximum flex acres, to plant crops other than the original base crops. The 1992 estimate would be about 1 million acres more than was flexed in 1991, the first year of flex options.

In addition to the pressure of staying competitive in world markets, U.S. agricultural producers face the challenge of minimizing the environmental effects of agricultural operations. Sustainable development—including farming—was a key goal of the recent U.N. Conference on Environment and Development in Rio de Janeiro and is likely to have policy implications in the future.

The type of agriculture described as sustainable is not necessarily low input, or low technology, but one that integrates several technologies that are more efficient and environmentally responsible. And although newer, sophisticated technologies will likely be adopted, many older, more familiar practices are building blocks for sustainable systems. Conservation tillage, new patterns of crop rotation, and integrated pest management are among the sustainable techniques being applied by farmers and researchers.

Abundant meat supplies and higher fruit output are curbing retail food price increases. The Consumer Price Index (CPI) for food is expected to average only 1-3 percent above 1991, down from an earlier projection of 2-4 percent.

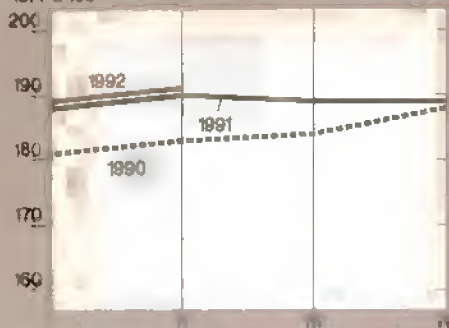
That's good news for consumers, who often see food as the major cause of overall inflation. But in fact, food prices have risen at a slower pace than the overall CPI in 14 of the past 22 years. Weighting price increases by the share of each item in consumer budgets shows that by far, housing costs contributed more to inflation—accounting for 43 percent of the CPI increase for all items.

Commodity Overview

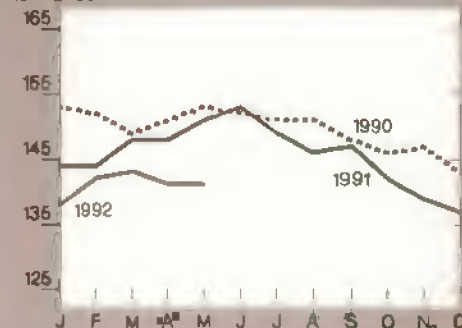
Prime Indicators

Index of prices paid by farmers

1977 = 100

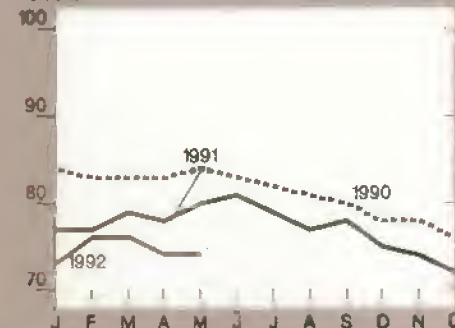
Index of prices received by farmers¹

1977 = 100

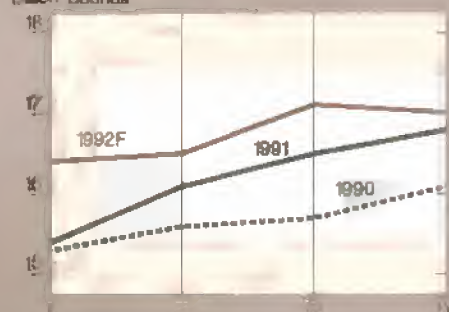


Ratio of prices received/prices paid

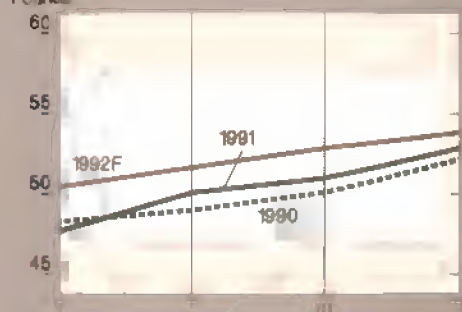
Percent

Total red meat & poultry production²

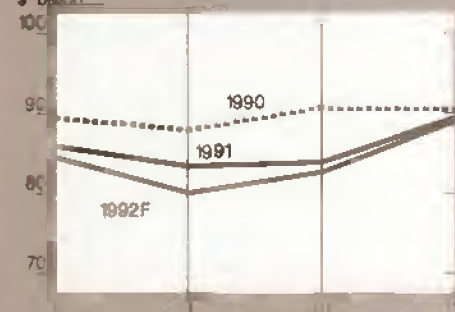
Billion pounds

Red meat & poultry consumption, per capita^{2,3}

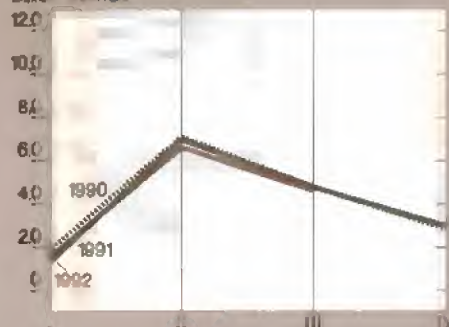
Pounds

Cash receipts from livestock & products⁴

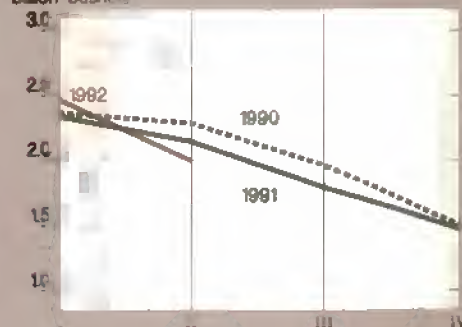
\$ billion

Corn beginning stocks⁵

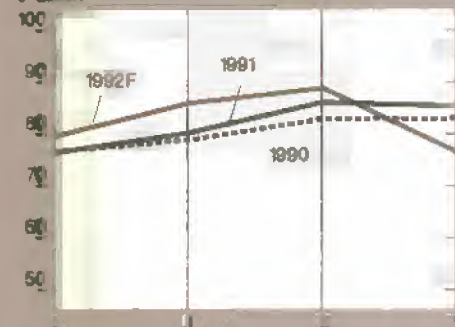
Billion bushels

Corn disappearance⁵

Billion bushels

Cash receipts from crops⁴

\$ billion

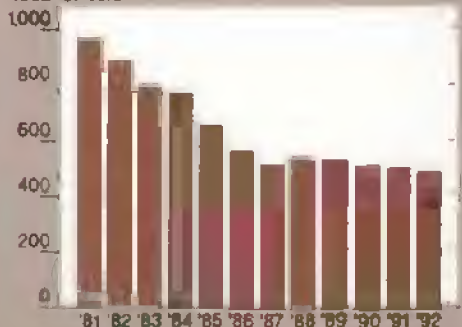
Real cash income (1987\$)⁶

\$ billion



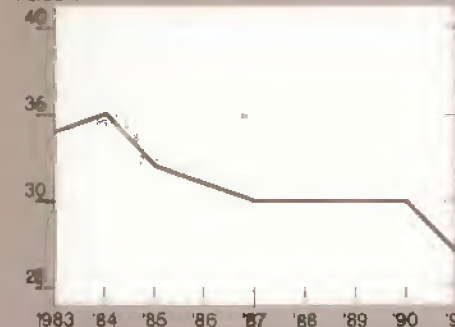
Average real value of farm real estate

1982 \$/acre



Farm value/retail food costs

Percent

¹For all farm products. ²Calendar quarters. Future quarters are forecasts for livestock, corn, and cash receipts.³I=Sept.-Nov.; II=Dec.-Feb.; III=Mar.-May; IV=June-Aug. Marketing years ending with year indicated.⁴Cash expenses plus net cash income equals gross cash income. ⁵1987\$ = 1982\$.⁶Retail weight. ⁷Seasonally adjusted annual rate.



Field Crops Overview

U.S. wheat, feed grain, and rice production will likely be up in 1992, while cotton and soybean production will likely be down from 1991's relatively high levels. Ending stocks for all crops except soybeans, oats, and barley are expected level or up in 1992/93—in some cases substantially. Cotton ending stocks are expected up more than 20 percent, and corn stocks up nearly 50 percent, from 1991/92 levels.

Globally, 1992/93 wheat production is projected up marginally to 548 million tons, but is expected to remain below use. (See Special Article on the 1992/93 global grain outlook.) A fractional year-to-year reduction is projected for wheat ending stocks, which will still be relatively low. World coarse grain production is projected to rise 5 percent. And gains in output are expected to exceed use, so coarse grain stocks are projected up. [For the latest market outlook for U.S. field crops, see tables 17-19. The world outlook is in table 23.]

U.S. Wheat Supplies Continue To Be Tight

Prospects for 1992/93 call for a larger U.S. wheat crop than last year's reduced level. The forecast 10-percent rise in total wheat production—to 2.19 billion bushels—is based in part on expected increases in harvested area and yields. Despite only a marginal increase in planted area, harvested area is expected up this year because of reduced winterkill, the lower ARP, and higher wheat prices.

While somewhat improved weather in key areas should help increase wheat yields above last year's level, weather problems reduced winter wheat yield prospects in a number of states between May 1 and June 1. The June 1 survey results show an average winter wheat yield estimate of 35.9 bushels per acre, down from the May 1 estimate of 37.3 bushels. Yield estimates are down in 13 states and up in only 3 states. In Illinois, the estimate is down 7 bushels per acre, and the drop is 5 bushels in Idaho, Michigan, Montana, Oregon, and South Dakota. Dry weather to a large extent accounts for these declines.

Even with a larger overall wheat crop expected in 1992, wheat supplies are forecast to be the lowest since 1975/76, given the relatively small prospective carryin. Supplies for the season are forecast at 2.65 billion bushels, more than 8 percent below last year's level.

With relatively tight supplies, prices for the season are forecast at \$3.25-\$3.65 per bushel. Partly in response to the higher prices, total wheat use in 1992/93 is projected down 10 percent from a year earlier, at 2.22 billion bushels. Exports are projected down 85 million bushels, and domestic use is projected down 152 million, due solely to a forecast 54-percent drop in feed and residual use.

Ending stocks for the 1992/93 season are projected up marginally to 427 million bushels, leaving a stocks-to-use ratio of 19.2 percent. This is above last year's 17.2 percent, but well below the 35.4 percent in 1990.

While many winter wheat producers have just finished harvesting the 1992 crop, spring wheat producers are concerned about moisture and temperature conditions. For the month of May, several spring wheat growing areas received less than 25 percent of their normal rainfall. As of June 21 about 57 percent of the spring wheat crop was rated excellent or good, and 9 percent poor or very poor.

1992 U.S. Corn Stocks Up Nearly 50 Percent

A larger U.S. corn crop—nearly 8.6 billion bushels—is forecast for 1992, a 15-percent rise over 1991's estimated production. The expected production increase is due in part to larger area, based on the March *Prospective Plantings* report, and reflects a lower acreage reduction program (ARP) and relatively favorable net returns for corn compared with soybeans.

Total corn use in 1992/93 is projected at just over 8 billion bushels, up 2 percent from the forecast level for 1991/92. Corn feed and residual use is projected up 100 million bushels, due to relatively tight supplies projected for barley and oats, expectations of higher wheat prices and lower corn prices, and continued livestock expansion. Food, seed, and industrial use is projected up 40 million bushels, stemming largely from the stronger economy and greater use of ethanol in gasoline blends, a result of the Clean Air Act. Exports are projected to remain unchanged from forecast 1991/92 levels.

With a rebound in production and only slightly higher use, ending stocks are projected to rise to 1.67 billion bushels in 1992/93, almost 50 percent above the forecast 1991/92 carryout of 1.12 billion bushels. Prices for the 1992/93 season are projected at \$1.90 to \$2.30 per bushel, below the range of \$2.35 to \$2.45 forecast for 1991/92.

USDA announced on May 29 that the acreage reduction program for the 1993 wheat crop will be zero percent. The 1993 crop will be planted starting in September.

Commodity Overview

How 1992 Program Enrollment Is Shaping Up

On May 27, USDA released a preliminary report of producer signups for the 1992 commodity programs. The report provides information on: farm and acreage participation in the 1992 programs ("regular," 0/92, and 50/92); acreage idled under the programs; and participants' use of flex acres. Following are some questions and answers associated with program signup.

What are the benefits and obligations associated with commodity program participation?

- Participating farmers are eligible for income support through deficiency payments, and for price support through the loan rate.
- To receive benefits, producers must idle a portion of their base acres in a conserving use. That percentage depends on the national acreage reduction program (ARP) announced for that crop.

When are farmers likely to participate?

- Farmers are more likely to participate when they expect market prices to be relatively low. In such years, deficiency payments increase net returns by an amount greater than the forgone income on idled ARP land.
- Farmers in areas of considerable yield variability are also more likely to participate.

How does a producer enroll in the commodity programs?

- A producer signs up at the local ASCS office. This year, signup for the 1992 commodity programs was held February 10 through May 1.
- The signup period is the same for all crops. An Illinois farmer who planted 1992 corn in early May signs up during the same period as a Kansas farmer who planted winter wheat the previous September.
- A participating producer must later certify to the local ASCS office that the farm is in compliance with the ARP. USDA checks that farmers are in compliance—and eligible for benefits—in several ways, including aerial photography.

Has participation varied over time?

- For most crops, participation tends to be fairly stable from year to year. This is because the expected returns to participation, for most farmers, are consistently higher than to nonparticipation, and because many producers are concerned about protecting their base.
- Participation is particularly high for crops that have the highest expected net returns relative to nonparticipation. For instance, a participant in the 1992 corn program could, on average, expect a net return of \$170 per acre, while a nonparticipant could expect \$125. For rice, those

numbers are \$260 and \$60 for the 1992 crop. Not surprisingly, participation in the rice program is consistently higher than in the corn program.

How does program participation vary among areas?

- For wheat and corn, participation rates tend to be high in areas where base acres per farm are highest and where agriculture is concentrated in one or two crops (such as corn and soybeans in Illinois, or wheat in Kansas). Participation is also generally highest in areas that experience relatively low rainfall and that have a short growing season.
- Opportunity costs associated with nonparticipation in all these areas can be quite high. For most producers, expected returns are higher with participation.
- Participation in commodity programs tends to be high in the Great Plains. In part because yields are often variable in these states, producers may depend more heavily on the income support offered by the programs than producers in other areas. Crop insurance participation is also fairly high in these areas.
- Corn and wheat program participation is relatively low in the Southeast. Agriculture is more diverse in this area, and corn and wheat production is more easily shifted among crops in years of high market prices. Because deficiency payments are lower when market prices are high, participation can be unattractive in such years. And with a more diverse agriculture, farmers who choose to participate often have small bases—and thus few acres on which to collect payments.

How are farmers using their flex acres in 1992?

- Participating farmers are using 8.3 million acres, or about 20 percent of their estimated maximum flex acres, to plant alternative crops in 1992. This is up from 7.3 million

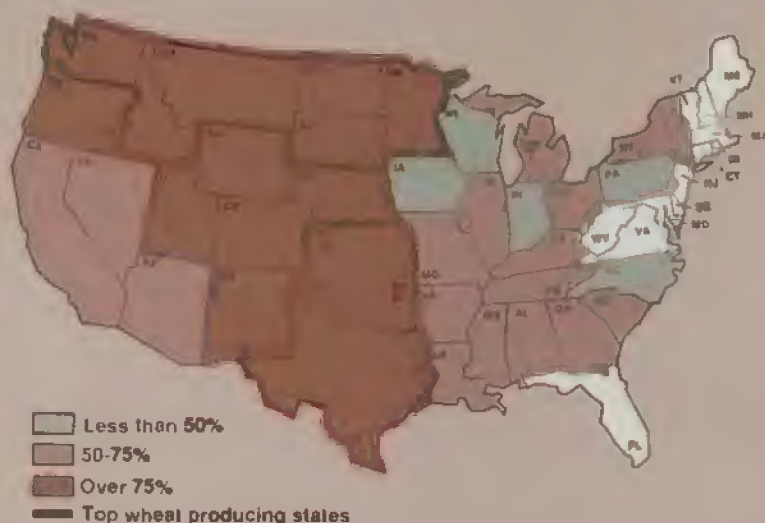
Except for Oats, Program Participation Is Generally Above 75 Percent

	Effective base	Enrolled base	Percent enrolled	ACR ¹	Flex acres planted to another crop	
	Million acres		Percent	Million acres	Percent of flex ²	
Wheat	79.0	65.0	82.2	3.2	3.2	19
Corn	82.2	61.9	75.4	3.1	2.8	18
Sorghum	13.6	10.5	77.4	0.5	0.6	23
Barley	11.1	8.3	74.4	0.4	0.7	32
Oats	7.3	2.9	40.4	0.0	0.4	50
Rice	4.1	3.9	93.0	0.0	0.4	38
Upland cotton	14.9	12.9	86.5	1.3	0.3	10

¹ Land idled under the ARP. ² Share of maximum possible flex acres (one-fourth of enrolled base)

Program Enrollment Tends To Be High in Major Producing Areas

1992 Wheat Enrollment

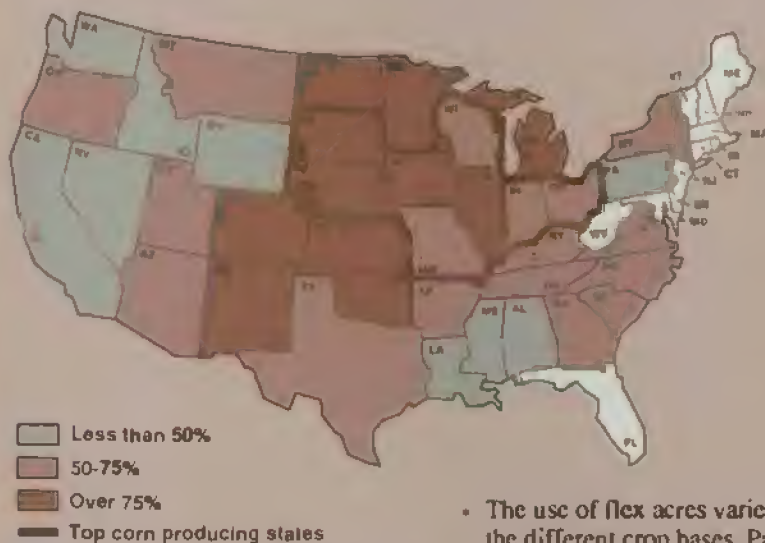


Wheat enrollment is high in Plains states and the Northwest. . .

Five states enrolled at least 90% of their wheat base acres:

Montana	92%
North Dakota	92%
Washington	91%
Kansas	90%
Oklahoma	90%

1992 Corn Enrollment



. . . Corn enrollment is high in Corn Belt states like Iowa, but also in some Plains states.

Five states enrolled over 80% of their corn base acres:

North Dakota	88%
Nebraska	87%
Kansas	87%
South Dakota	84%
Iowa	84%

1992 preliminary enrollment, percent of base acres
Source: USDA

acres—and 17 percent of maximum flex acres—in 1991. Market conditions are likely important, as is the absence of the winter wheat option (discussed below). In addition, some farmers may be less cautious in using flex options than in 1991, the first year these options were available.

- The use of flex acres varies among the different crop bases. Participants in the oats, rice, and barley programs appear most interested in planting crops other than the base crop.
- Barley producers are using a higher percent of their flex acres in 1992 than 1991. Many barley producers are likely planting spring wheat—a primary competitor with barley—on some of their flex acres. Prices of spring wheat have been relatively high in 1992.

- Use of flex acres has also increased among wheat producers. In 1991, 53 percent of participating wheat base was enrolled in the “winter wheat option,” available only for the 1991 crop. Under this option, acreage did not have planting flexibility, and payment acreage was not reduced by 15 percent as for other crops; the deficiency payment rate was based on a 12-month price. All wheat participants now have flexibility, which helps explain why the share of base planted to other crops is higher this year.

[Joy Harwood (202) 219-0840]

Commodity Overview

As with corn, production of sorghum and oats is projected to increase in 1992, at 700 million and 275 million bushels. In contrast, a lower prospective planted area for barley is expected to lead to a drop in production in 1992, to 420 million bushels versus 464 million in 1991.

Soybean Ending Stocks Down 20 Percent

The 1992 U.S. soybean crop is projected at over 1.9 billion bushels, down 3.6 percent from 1991. The projected decline chiefly reflects smaller area. For most of the 1991/92 crop year, prices for corn have been favorable compared with soybeans. As a result, farmers have likely increased corn plantings instead of soybeans.

Total soybean use in 1992/93 is projected at slightly less than 2 billion bushels, down 2 percent from last year. Crush is expected to remain stable and exports to decline 6 percent. Even so, the projected crush and export levels—at 1.2 billion and 650 million bushels—are relatively high compared with recent history.

With soybean supplies projected down more than 4 percent in 1992/93, and continued strong use, ending stocks are projected at 240 million bushels, 20 percent below the forecast level for 1991/92. Soybeans are the only U.S. crop—except oats and barley—for which USDA is projecting a drop in 1992/93 ending stocks.

Sluggish Demand To Curb U.S. Soybean Exports

Early projections for 1992/93 call for global soybean production about the same as the 105.1 million tons estimated for 1991/92. Despite expected below-trend growth in foreign oilseed output, U.S. soybean exports will be constrained by sluggish demand and an expected rebound in South American exports, leading to small declines for 1992/93. U.S. soybean meal and soybean oil exports are projected to remain close to 1991/92 levels.

World soybean production in 1991/92 is estimated up 1 percent from 1990/91, largely because of significant recovery in the Brazilian crop from drought. Crush shows stronger growth, estimated at 3 percent, as meal demand rises. Ending soybean stocks are estimated down 6 percent.

With strong demand, and less South American competition, U.S. soybean exports did well early in 1991/92. U.S. exports of soybeans are estimated at 18.8 million tons, 24 percent above the reduced 1990/91 level. And U.S. market share has risen to 69 percent in 1991/92, from 60 percent in 1990/91.

Estimates of U.S. soybean meal exports, up 13 percent in 1991/92, were recently lowered to 5.6 million tons because of relatively low allocations of protein meal to Russia in its recent round of credits. U.S. exports of soybean oil, fueled by lower prices and expanded use of export programs, at 650,000 tons, are nearly double the very low 350,000 tons in 1990/91.

U.S. Cotton Use To Continue Strong

The forecast for the 1992 U.S. cotton crop—at 17.2 million bales—is down only 2 percent from 1991's near-record level. The expectation of smaller planted area helps account for the predicted production decline.

Total cotton use in 1992/93 is forecast at 16.5 million bales, up 1 percent from last year. With mill use remaining strong, domestic use is forecast at 9.5 million bales, the same as forecast for 1991. U.S. exports are projected to rise 3 percent, to 7 million bales, in response to strong global use.

Ending stocks in 1992/93 are projected at 4.6 million bales, 21 percent above the current year. The 1992/93 stocks-to-use ratio is projected at 27.9 percent, up from this year's 23.3 percent.

World Cotton Stocks Projected Up

For 1992/93, world and foreign cotton production are projected at 94 and 76.8 million bales, down nearly 1 million and 500,000 bales, but the second highest ever. Global use is projected up 4 percent, to a record 89 million bales, while foreign use is projected at 79.5 million. Despite the gains, use remains well below production, and world and foreign ending stocks are projected up 12 and 11 percent.

Global exports in 1992/93 are also projected up—by 7 percent to 24 million bales. And, with large carryin and continued strong production, foreign exports are also projected to rise—to 17 million bales, up from this season's 15.6 million.

Although 1992/93 U.S. exports are projected to rise by 200,000 bales, U.S. market share is expected to be constrained by the greater foreign competition. U.S. market share for 1992/93 is projected near the historical average, at 29 percent, slightly below 1991/92.

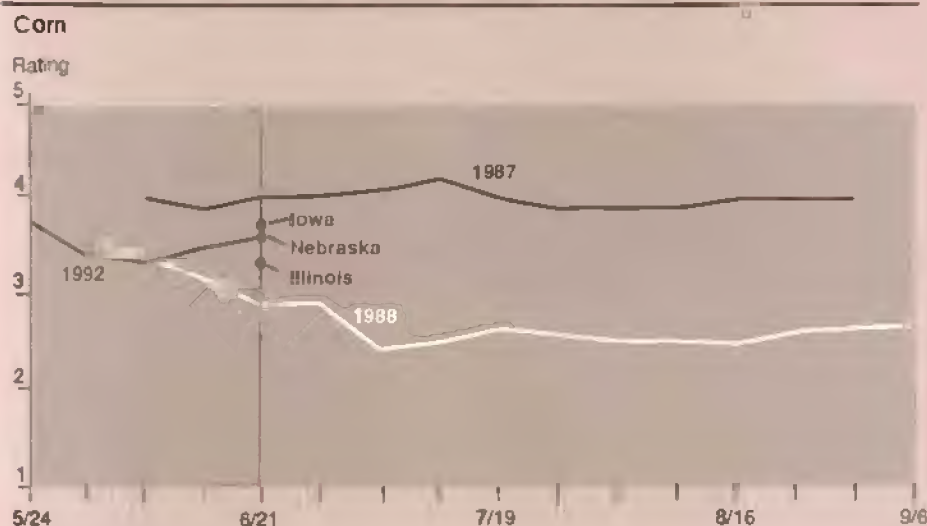
Wrapping up the current marketing year, global cotton production is estimated at a record 94.9 million bales, 9 percent above the previous season. Much of the gain occurred in China; but output rose in nearly all other major producing countries except the former Soviet Union. At 85.5 million bales, global consumption remained strong although marginally below last year. For the second consecutive year, consumption was below production—sharply—and ending stocks shot up dramatically to an estimated 38.8 million bales, 35 percent above carryin.

Rice Ending Stocks Expected Up in 1992

Increased rice area is the primary factor behind the projected increase in the 1992 U.S. rice crop, to 166 million cwt. Many factors—such as a 0-percent ARP, improved water supplies in critical areas, and favorable weather at planting time—contributed to the rise in area planted.

U.S. Field Crops at a Glance

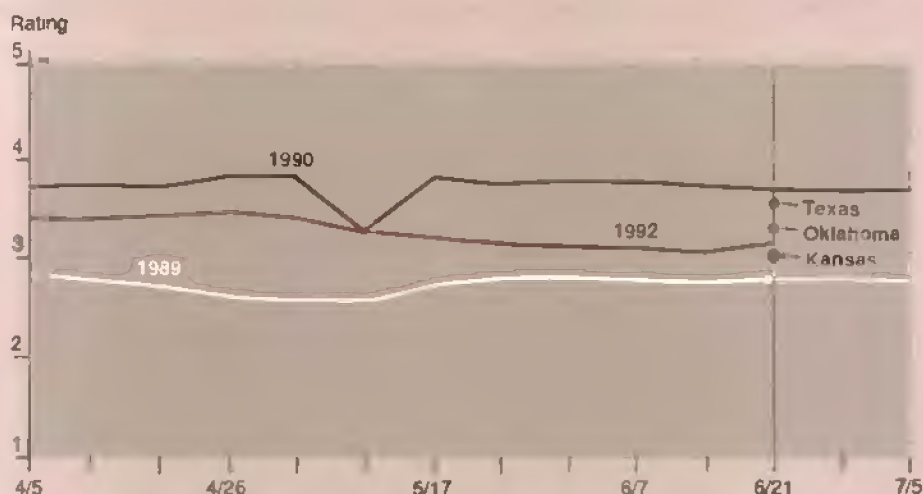
Crop Conditions Improve as June Draws to a Close



In late May, record-setting cold hit the Great Plains and Corn Belt, with temperatures dipping to the upper 20's and low 30's. Most of the Corn Belt, Central and Northern Plains, and Pacific Northwest received well-below-normal rainfall in May, and concern arose about crop prospects.

In the central Corn Belt, rainfall totals for May were less than 10 percent of normal in several areas. Typically, moisture accumulates in these areas in the spring, fostering crop development in July and August, when water needs are greatest. These dry conditions in May and early June were somewhat moderated by unseasonably cool weather. Low temperatures generally limited the crop stress that would have resulted if the dryness had coincided with higher temperatures.

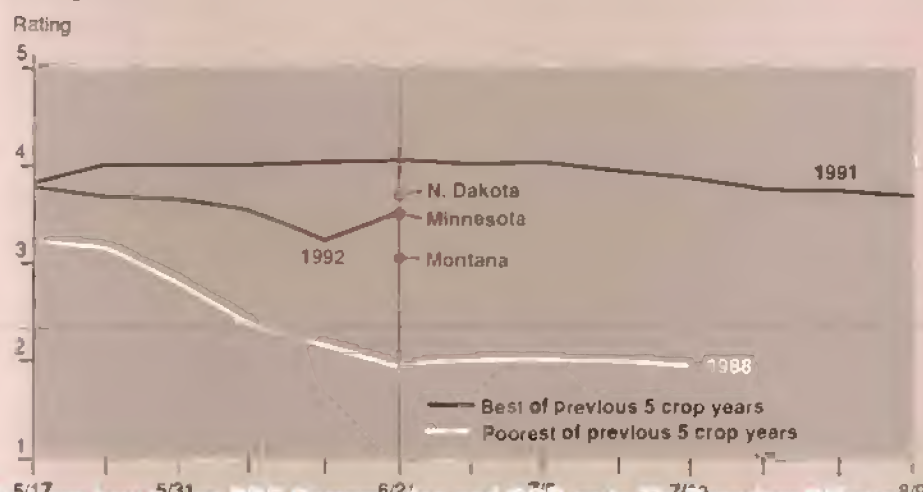
Winter Wheat



Timely rains are critical in determining final crop yields. In the Northwest and across the Midwest, rains fell in mid-June, improving crop conditions in most major producing states. As of June 21, the corn crop was rated mostly good to fair, with the best crop conditions reported in the East and South. From June 15 to 19, a powerful late-spring storm crept eastward across the nation, improving moisture conditions in the Corn Belt.

Dry weather has been a concern in the Pacific Northwest and in the northern Great Plains, where the winter wheat crop headed toward harvest with generally fair to poor ratings. The worst conditions were in Washington, and South Dakota where, as of June 21, over 50 percent of the winter wheat crop was rated poor or very poor.

Spring Wheat



The spring wheat crop is rated fair to good, despite general dryness. Montana and South Dakota ratings are the lowest, while the crop in North Dakota—the main producing state—is rated higher. Beneficial rain in mid-June eased dryness somewhat.

In contrast to the Corn Belt, upper Plains, and Pacific Northwest, wet weather has been a problem in the South. Rains in Texas and Oklahoma delayed winter wheat harvesting, reducing test weights in some areas and causing some sprout damage.

Commodity Overview

Total U.S. rice supplies are projected to increase nearly 20 million cwt in 1992/93, largely because of the projected production increase. The increase in supplies—along with a slower rate of growth in domestic use—is expected to put downward pressure on U.S. prices. Season-average prices in 1992/93 are projected between \$6.25 and \$7.25 per cwt, compared with \$7.45 to \$7.55 in 1991/92.

Total rice use in 1992/93 is forecast at 168.3 million cwt, up about 10 percent from last year but about 0.4 percent below the May 1992 estimate. The reduction in this forecast is due to a downward revision in the projected growth rate for domestic rice use, prompted by results of a recent Economic Research Service rice distribution survey and reports by the Rice Millers Association. The June forecast for 1992/93 domestic use is 94.3 million cwt, down from the May forecast of 99 million cwt but up from the forecast of 92.8 million cwt for 1991/92.

Slower growth in domestic use and lower prices are improving U.S. export prospects. The June export forecast for 1992/93 is 74 million cwt, up from last month's forecast of 70 million cwt and the 60 million estimated for 1991/92.

Ending stocks for 1992/93 are forecast at 36.3 million cwt, compared with 32.2 million in 1991/92. The stocks-to-use ratio for 1992/93 is currently pegged at 21.6 percent, up slightly from the forecast for 1991/92. [Joy Harwood (202) 219-0840 and Carol Whitton (202) 219-0824]

For further information, contact: Sara Schwartz, world food grains; Edward Allen, domestic wheat; Janet Livezey, domestic rice; Pete Riley, world feed grains; Tom Tice and Jim Cole, domestic feed grains; Nancy Morgan, world oilseeds; Roger Hoskin and Scott Sanford, domestic oilseeds; Carol Whitton, world cotton; Bob Skinner and Les Meyer, domestic cotton. World information (202) 219-0920, domestic (202) 219-0840. **AO**

Livestock, Dairy & Poultry Overview

U.S. imports beef and veal are up in 1992, with increased shipments from Australia, New Zealand, Canada, and Brazil. Imports from Australia and New Zealand are particularly significant because of the Meat Import Law, which calls for controls if imports exceed a trigger level. These two countries accounted for 90 percent of meat imports in 1991. The Cattle Council of Australia expects the U.S. to ask for a voluntary restraint agreement (VRA) by midsummer, if present conditions continue.

Production of broilers, turkeys, and eggs is above a year ago, resulting in generally lower producer prices. Broiler production for 1992 is expected to increase about 5 percent, turkey output about 3 percent, and egg output around 2 percent. Lower prices and slightly higher feed costs compared with last year will pressure net returns and should slow production growth for the rest of the year.

Hog producers' returns turned positive in May for the first time since October 1991. Producers are apparently following through with intentions announced in March to scale back the rate of herd expansion. [For the latest outlook in livestock, dairy, and poultry markets, see tables 10-16.]

Big Surge in U.S. Meat Imports

U.S. imports of beef and veal are up, mainly because of increases from Australia, New Zealand, Canada, and Brazil. Imports from Australia and New Zealand are particularly significant because of the Meat Import Law, which invokes quotas if imports of certain fresh, chilled, and frozen beef, veal, mutton, and goat meat products—about 80 percent of all U.S. meat imports—are expected to exceed a trigger level. The trigger level is set by a formula based on domestic production.

Australia and New Zealand accounted for 90 percent of these U.S. meats imported in 1991.

Excluded from the law are beef and veal imports from Canada, under the U.S.-Canada Free Trade Agreement, and imports from countries where foot-and-mouth disease is prevalent, such as Argentina and Brazil, because beef imported from these countries must be cooked.

The 1992 trigger level for the Meat Import Law is approximately 1.31 billion pounds, product weight—only slightly below the 1991 trigger of 1.32 billion. However, through May 23, reported imports were up 16 percent over last year, led by a 38-percent increase in Australian beef, and a 6-percent rise in New Zealand imports. A voluntary restraint agreement (VRA) was negotiated with Australia and New Zealand during the last quarter of 1991, because of the high level of beef imports during the first part of the year.

The Cattle Council of Australia expects the U.S. to ask for VRA's if present trends continue. In order to ensure the orderly export of beef from Australia, exporters have asked the Australian Meat and Livestock Corporation to control exports from Australia to the U.S. Export entitlements will be allocated on the basis of past market shares.

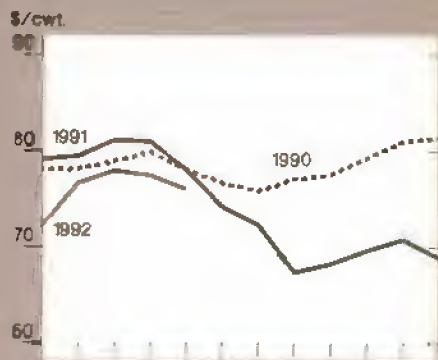
Two factors account for increased Australian output. Dry weather has encouraged early slaughter, and a cash squeeze has prompted producers to slaughter cows. About 60 percent of Australia's output is exported, and with sales to Japan showing little growth, much of the increased slaughter is destined for the U.S.

U.S. imports from Canada are also increasing, as Canada's dollar value has fallen relative to the U.S., making sales to the U.S. more attractive. Imports from Brazil are also forecast to rise in 1992, now that Brazil has an acceptable residue testing program. Between June 1, 1990 and August 14, 1991, the U.S. prohibited beef from Brazil because of the absence of an acceptable residue testing program.

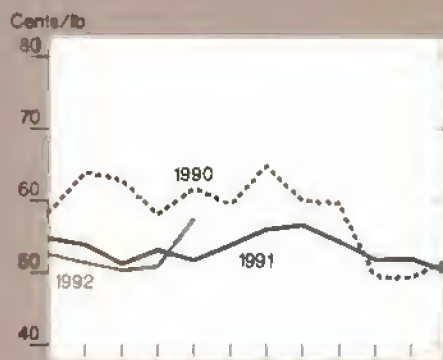
Commodity Market Prices

Commodity Overview

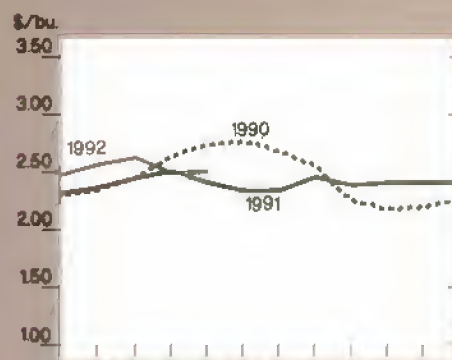
Choice steers, Nebraska



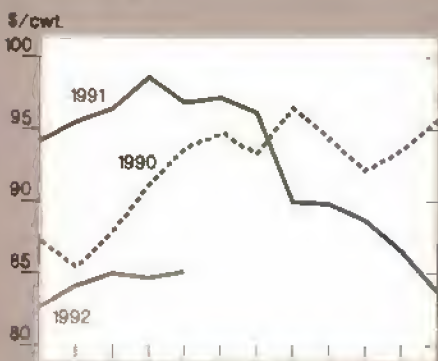
Broilers, 12-city average



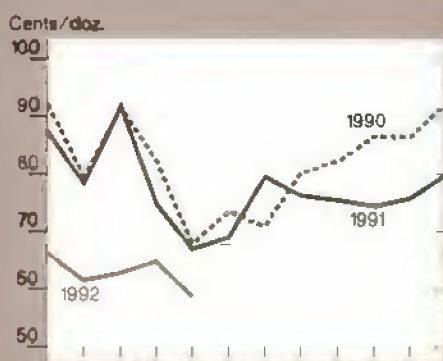
Corn, Central Illinois¹



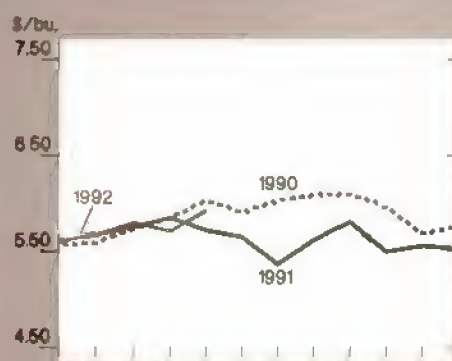
Medium steers, Oklahoma City²



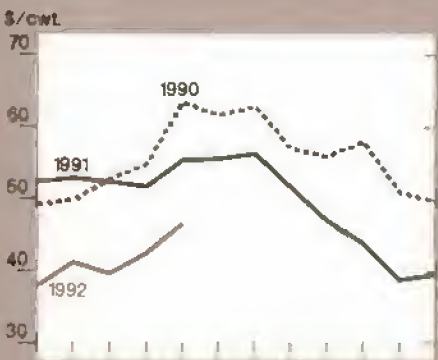
Eggs, New York³



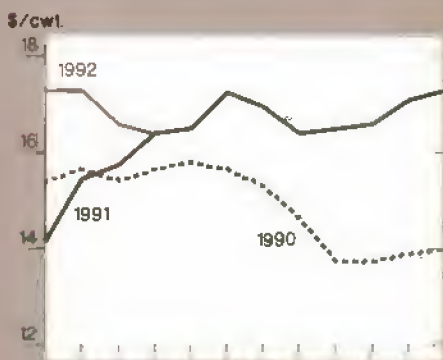
Soybeans, Central Illinois⁴



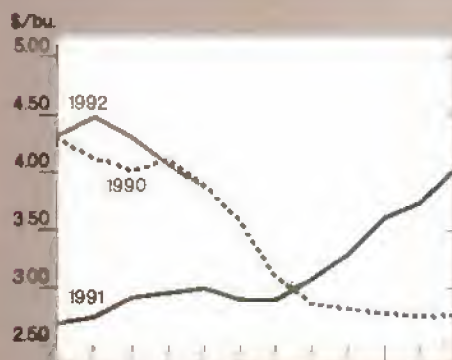
Barrows and gilts, 6 markets, Omaha



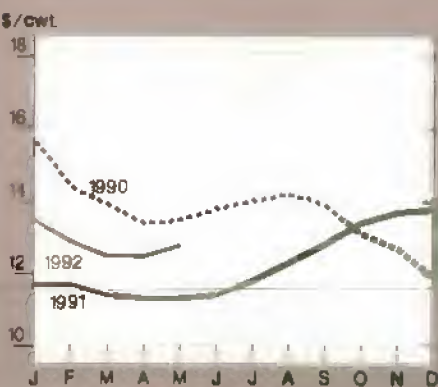
Milled rice, SW Louisiana⁵



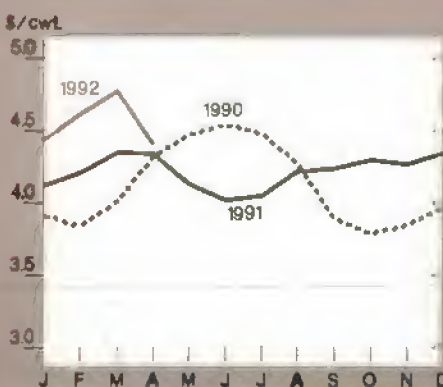
Wheat, Kansas City⁶



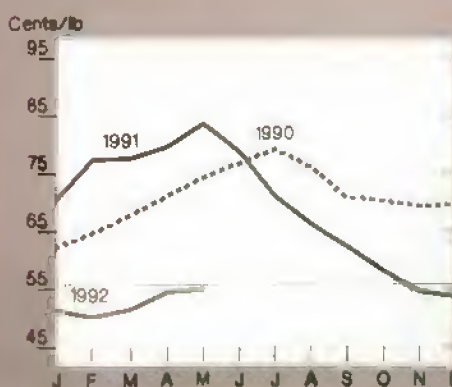
All milk



Sorghum, Kansas City



Cotton, average spot market



¹No. 2 yellow. ²600-700 lbs medium no. 2. ³Grade A large. ⁴No. 1 yellow. ⁵U.S. No. 2 long-grain. ⁶No. 1 HRW.

Commodity Overview

Broiler Prices Volatile

The 12-city wholesale broiler price rose more than 11 percent in May, to 55 cents per pound, and averaged nearly 3 cents a pound higher than last year at this time. Stronger whole-bird prices reflected seasonal demand for broiler meat, typical around the Memorial Day weekend, as well as higher broiler breast meat prices, which received a boost from fast-food chains preparing for summer promotions. However, after Memorial Day, prices sagged to levels below a year earlier, with product movement below expectations.

Even with increased poultry and red meat production, whole-bird prices may continue firm through summer—although below late-May levels—helped by seasonal demand, high broiler exports, and indications of slower output expansion. Second- and third-quarter wholesale prices for whole birds will probably average 51-55 cents a pound, essentially unchanged from a year ago.

In retail markets, however, competition with other low-priced meats will dampen whole-broiler prices through the summer. Second- and third-quarter retail prices for whole broilers are expected to be slightly below a year ago, and average in the mid-to high 80's.

Generally low net returns over the last year have encouraged producers to make supply adjustments. The number of broiler-type chicks hatched in April and May, an indicator of production 2 months out, increased 2-3 percent from a year ago, compared with a 4-6-percent increase last year. And the broiler hatching-egg flock, a rough indicator of production 3 months out, was only 2 percent above last year on May 1, versus a 6-percent rise in 1991. This will slow second- and third-quarter production to 3-4 percent in both quarters compared with a year earlier, far less than last year's 8-percent quarterly increases.

U.S. broiler exports this year could match 1991's record, in spite of a steep reduction in shipments to the former USSR. New sales there will continue to

hinge on financing arrangements, especially credit programs.

Higher sales to the Pacific region are likely, particularly to Japan and Hong Kong, which together may account for half of total exports. Sales are also likely to increase to Mexico, Canada, the Caribbean, and to the Middle East. The Export Enhancement Program (EEP) will again play a major role in exports to the Middle East and Singapore, and EEP sales will likely resume to Egypt.

Moderate Growth In Turkey Output

Poult placements point to second-quarter turkey output about 3 percent above last year, with similar performance expected during the third quarter. For 1992 overall, production is expected to rise nearly 3 percent, close to last year's 2-percent production growth.

These relatively low growth rates reflect the consistently poor, usually negative, returns turkey producers have experienced since fourth-quarter 1991. A weak economy in 1990-91, compounded by large increases in pork supplies since

mid-1991, have contributed to the low returns.

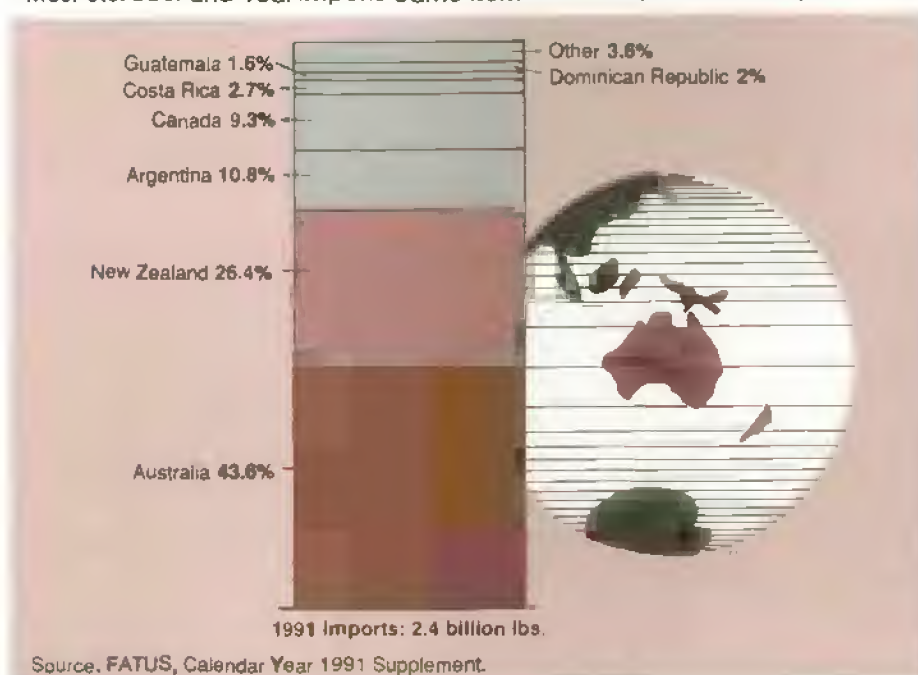
Wholesale turkey prices have been below last year since March. In May, however, tom turkey prices, benefiting from strong breast meat demand, moved slightly ahead of steady hen prices. For the second quarter, Eastern region hen prices are estimated at 60-61 cents a pound, compared with 62 cents last year. On May 1, turkey stocks were at record highs, and more than 5 percent above last year's level.

In the second half of 1992, wholesale prices should rise seasonally and average near year-earlier levels. Moderate levels of production increases, continued record exports of turkey parts, and economic recovery will boost prices, and returns should move above breakeven. But large stocks and supplies of virtually all meats, particularly pork, will continue to pressure prices.

Large Supplies Keep Pressure on Egg Prices

A 3-percent increase in table-egg production for the first half of 1992 continues to

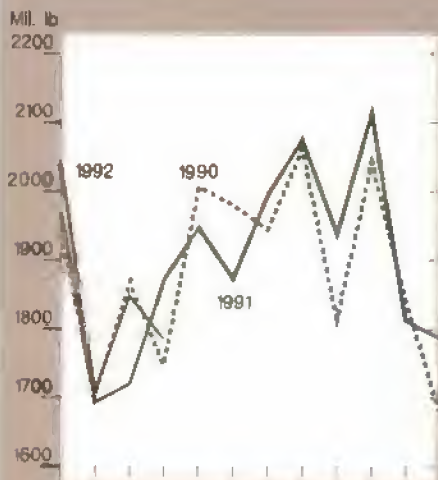
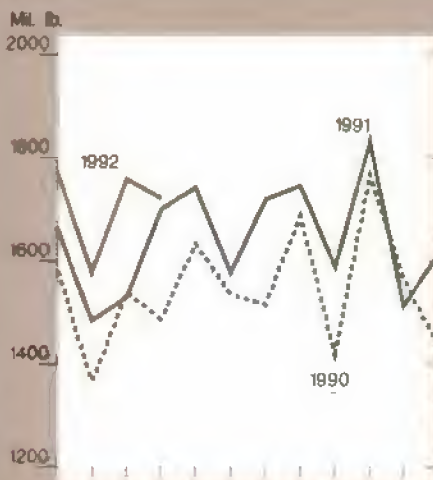
Most U.S. Beef and Veal Imports Came from Australia and New Zealand



Livestock & Product Output

Commodity Overview

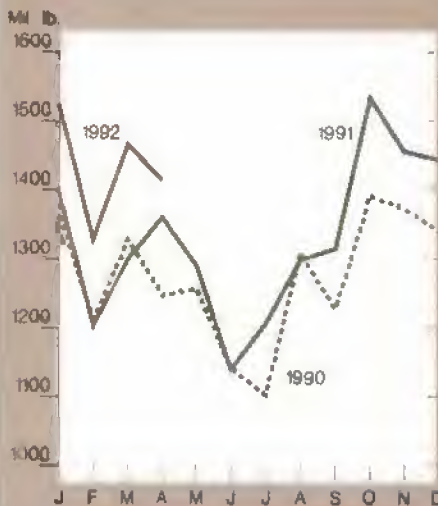
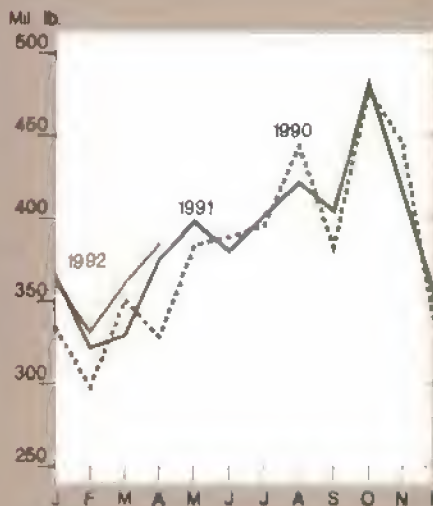
Commercial beef

Broilers¹

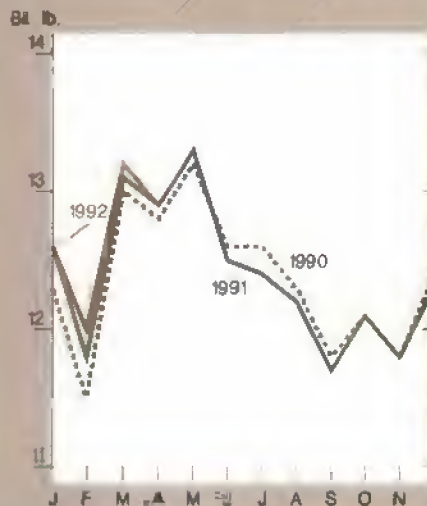
Eggs



Commercial pork

Turkeys¹

Milk



¹Federally inspected production, ready-to-cook.

exert downward pressure on egg prices. New York wholesale prices for Grade A large eggs are averaging well below a year ago, with second-quarter prices down to around 60 cents per dozen. Prices are expected to remain near breakeven levels for the rest of the year.

While expected flock size reductions may relieve some of the pressure on prices, total flock size will remain relatively high. The table-egg laying flock on May 1 totaled 231 million hens, 1 percent above a year ago, but down 1 percent from April.

Per capita egg consumption for 1992, at 235 eggs, is estimated fractionally higher than last year, as egg product use continues to grow. Egg products are used in a variety of forms, and pasteurization of egg products eliminates risks associated with bacterial contamination. Eggs are increasingly used in liquid, dried, and frozen form by food manufacturers, as well as by hotels and restaurants.

As a share of total egg consumption, egg product use increased to almost 22 percent in 1991, equivalent to 51 eggs per capita. Eggs used in the production of liquid, frozen, and dried egg products in the

first quarter of 1992 totaled 305 million dozen, up 20 percent from the previous year.

Egg exports this year are expected to increase about 2 percent, reaching 158 million dozen, shell equivalent. This would be the highest export level since 1982 and account for about 2.7 percent of total egg production. Lower prices have improved the U.S. competitive position in most markets, but EEP sales remain important in determining the 1992 export level. Through April, EEP sales were about double the sales of a year ago.

Commodity Overview

Hog Prices Show Spring Recovery

In May, hog producers' returns turned positive for the first time since October 1991. However, with third-quarter pork production forecast 11 percent above last year, burdensome cold storage stocks will limit prospects for improved profitability.

By late spring, hog prices should have reached the year's high—in the high \$40's per cwt—but by late summer, prices are expected to fall to around \$40. Despite expected feed cost declines from spring, the summer's breakeven price is expected in the low \$40's per cwt.

Hog producers appear to be carrying through with earlier announced intentions to scale back herd expansion. Sow slaughter during March-May showed no signs of significant breeding herd liquidation or expansion. But although the rate of production is expected to moderate in the fourth quarter, annual pork production is still likely to be the highest on record. As a result, hog prices are expected to average in the high \$30's to low \$40's.

Retail pork prices through May are down 8 percent from a year ago, due to lower hog prices. Retail prices are expected to remain below last year throughout 1992 and average 5-7 percent lower than last year.

U.S. pork exports in the first quarter of 1992 increased 48 percent over last year due to a large boost in sales to Japan and Mexico. However, tougher competition from Taiwan and Denmark expected in the coming months will probably limit further export increases to Japan. Expected lower U.S. pork prices should support increased sales to Mexico.

U.S. pork imports dropped 17 percent in the first quarter from the same period a year ago. Sharp declines in imports from Denmark and Eastern Europe, as well as slightly lower shipments from Canada, account for the overall decline.

Brisk Cheese Demand Pulls Up Milk Prices

Cheese prices rose this spring in the wake of expanded commercial cheese use, low commercial stocks, and tight supplies of raw milk. But May's price increase was well below April's, and wholesale prices may remain relatively stable this summer. Even so, the seasonal rise in farm milk prices will be relatively large in the coming months due to the higher cheese prices.

During May, prices on the National Cheese Exchange rose about 4 cents per pound, following earlier increases of about 15 cents. With milk production declines in Midwestern cheese producing areas, market needs were met by moving as much western milk as possible into cheese production and by using nonfat dry milk to supplement raw milk in cheese production. So cheese makers had to compete with a nonfat dry milk market already tightened by brisk domestic disappearance and increased export contracts under the Dairy Export Incentive Program. By early June, nonfat dry milk prices were 21 cents per pound higher than in early February.

Later in 1992, the Minnesota-Wisconsin (M-W) price of manufacturing grade milk, the benchmark for prices under the Federal order system, could exceed 1991's peak of \$12.50 per cwt—even without further increases in wholesale prices of cheese and nonfat dry milk. Farm milk prices will likely rise rapidly during June-August, reflecting wholesale price increases.

However, most of the seasonal price rises may occur by late summer. Production response to higher farm prices and a weak economic recovery will probably limit autumn price increases, and could even generate counterseasonal price declines.

For further information contact: Richard Sullman and Agnes Perez, coordinators; Ron Gustafson, cattle; Leland Southard, hogs; Lee Christensen, Agnes Perez, and Larry Witucki, poultry; Jim Miller and Sara Short, dairy. All are at (202) 219-1285. **AO**

Specialty Crops Overview

USDA forecasts higher output of peaches, apricots, nectarines, and plums in California this year, boosting overall U.S. production of these fruits. Although California's sweet cherry production will decline from 1991, bumper crops in the Pacific Northwest will bring total U.S. output 36 percent above last year. And prospects of a larger orange crop in Sao Paulo, Brazil squeezed prices for U.S. frozen concentrated orange juice this spring.

Fall potato acreage will likely decline in 1992 because of low prices for 1991 crop potatoes. U.S. sugar production for 1991/92 was higher with Louisiana's improved crop, but the beet sugar output was lower because of reduced sugar recovery from beets. U.S. cigarette output dropped about 2 percent in 1991 because of declining domestic demand. [For the latest specialty crop outlook, see tables 20-22.]

California Leads Rise in Stone Fruit Output

USDA's initial forecast for the 1992 peach crop places U.S. production at 2.53 billion pounds, down 5 percent from last season but 13 percent above 1990. The forecast for California freestone peaches places production at 640 million pounds, up 5 percent from last year and 7 percent from 1990. California is the largest freestone peach producer, and its fresh peach shipments through May ran 40 percent ahead of year-earlier levels.

California's 1992 clingstone peach production is forecast 7 percent above last season, with favorable weather aiding crop progress. California clingstone peaches are used mostly for canning.

Commodity Overview

But peach growers in the Southeast expect a smaller crop than 1991's bumper output. Scattered frosts in March reduced fruit set in some areas of Georgia and South Carolina. Harvest began about a month later than normal in South Carolina as cold weather in the spring slowed development. South Carolina is the number-two freestone peach producer, and the state's fresh peach shipments through May ran behind 1991. Grower prices generally were lower than a year earlier.

Nectarine and plum production forecasts for California also exceed last season's output, with nectarines forecast up 7 percent. Harvest is ahead of last season, because of warm weather and rapidly maturing fruit, with fruit size and quality reported good to excellent for nectarines. Forecast California plum output exceeds 1991 output by 15 percent, with growers' f.o.b. prices at the end of May lower than a year earlier.

The U.S. apricot production forecast surpasses 1991's short output by 15 percent. Hail damage in California and severe freezes in Utah and Washington reduced output last year. Growers' f.o.b. prices during May ranged from \$10 to \$17 per two-layer traypack, about half the level of prices received a year earlier.

Pollination problems hampered California's sweet cherry crop, which is estimated 25 percent lower than last year. However, larger crops in other western states raised the U.S. forecast 36 percent above last year, and 24 percent above 1990. F.o.b. prices for sweet cherries in May, at \$18-\$24 per 18-pound carton, fell short of year-earlier levels.

Bartlett pear output in the three Pacific coast states is forecast up 4 percent from 1991 and 4 percent smaller than in 1990. Above-average temperatures boosted fruit maturity and size.

USDA forecasts 1992 almond production at 570 million pounds, shelled basis, 16 percent higher than 1991, but lower than the industry's earlier expectations. Cool weather and fog hampered pollination, reducing production potential.

Brazil's Orange Output Higher

Preliminary estimates place Brazil's 1992 Sao Paulo orange crop in the range of 270-275 million boxes, up from 250

million boxes last year and 242 million in 1990. Sao Paulo produces over 95 percent of Brazil's oranges used for processing. Expectations of a larger Sao Paulo crop squeezed U.S. wholesale frozen concentrated orange juice prices this spring.

Estimates of Florida's all-orange crop for 1991/92 currently stand at 139 million boxes, down 8 percent from last season. Orange trees reportedly carried a "good" to "excellent" bloom this spring. Imports of orange juice are ahead of last year, largely due to the smaller Florida crop.

Dry Bean & Potato Output To Fall

Dry bean producers indicated intentions to plant 22 percent less acreage in 1992 than in 1991. Reductions in Navy and pinto bean area led the decline, with low prices for the large 1991 Navy and pinto bean crops a factor.

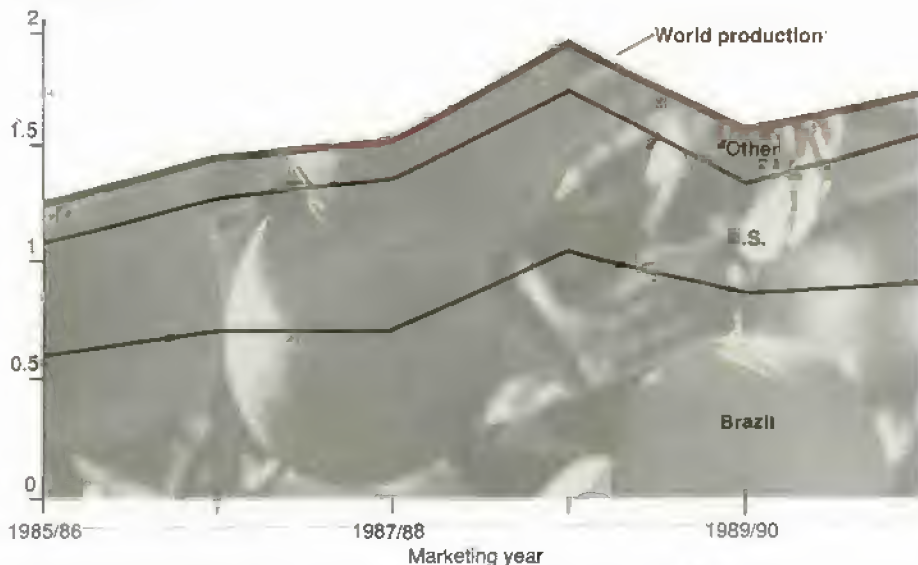
USDA releases its first estimate of 1992 fall potato acreage on July 9. Most analysts expect less fall acreage in 1992 because of low prices for 1991 potatoes. Production this past winter and spring rose modestly from the year before. Winter and spring output each account for about 6 percent of the annual potato crop, while the fall crop dominates with 87 percent.

U.S. sugar production from cane and beets for fiscal 1991/92 rose 3 percent from the year before to 7.2 million short tons, raw value. But lower-than-expected yields of sugar per ton of cane and beets cut output by 125,000 tons from the December forecast. Unusually mild winter temperatures in some key beet growing areas resulted in higher-than-normal sugar loss among unprocessed beets.

Forecasts of U.S. sugar consumption for fiscal 1991/92 also fell from earlier estimates. Last December, USDA estimated fiscal 1991/92 consumption at 8.925 million short tons, raw value, based on growth in sugar use observed over the last 2 years. By June, the estimate was revised downward, to 8.8 million tons, a scant 0.3 percent above the previous year. Sugar deliveries to the confectionery, bakery, and cereal industries showed

Brazil Squeezes U.S. Share of World Orange Juice Output.

Mil. metric tons



The first marketing year (1985/86) began Dec. 1, 1985 in the Northern Hemisphere, and July 1, 1986 in the Southern Hemisphere.

Source: USDA.

Commodity Overview

unexpected weakness during the first quarter of 1992.

U.S. raw sugar prices averaged 21.1 cents a pound in May, down marginally from a year ago. U.S. domestic prices have weakened since April because of the slowdown in consumption growth and increased inflow of sugar imports. U.S. price supports for sugarcane and sugarbeets have typically resulted in raw sugar prices of 21 cents a pound or higher. However, in early June prices fell under 21 cents.

Domestic Tobacco Use Down, but Exports Rise

U.S. cigarette output fell about 2 percent in 1991 because of reduced domestic demand. U.S. smokers bought 510 billion cigarettes in 1991, 3 percent less than in 1990. Annual average cigarette use per adult declined 4 percent in 1991 to 2,713.

The drop in domestic cigarette use is expected to continue in 1992. Higher prices, increasing restrictions on smoking, publicity linking smoking with heart and lung diseases and cancer, and declining social acceptance of smoking in public have cut U.S. cigarette use by 20 percent in the last 9 years.

But rising foreign demand both for U.S. cigarettes, and for U.S. tobacco to manufacture high-quality cigarettes, offset some of the decline in demand for tobacco for domestic cigarettes. Exports of cigarettes rose 9 percent in 1991, to 179 billion, and exports of unmanufactured tobacco rose 1 percent to 499 million pounds (638 million pounds, farm-sales weight). Leaf export volume in 1992 is expected to remain near last year's level as foreign smokers continue to shift to

higher quality cigarettes containing more U.S. tobacco. But cigarette exports are expected to decline because of reduced sales to the former Soviet Union and other European countries. (Glenn Zepp (202) 219-0883)

For further information, contact: Dennis Shields and Diane Bertelsen, fruit and tree nuts; Gary Lucier, vegetables; Peter Buzzanell, sweeteners; Doyle Johnson, greenhouse/nursery; Verner Grise, tobacco; David Harvey, aquaculture; Lawrence Glaser, industrial crops. All are at (202) 219-0883. **AO**

July Releases from USDA's Agricultural Statistics Board

The following reports are issued at 3 p.m. Eastern time on the dates shown.

July

- 1 Farm Production Expenditures 1991 - Preliminary
- 6 Egg Products
Poultry Slaughter
- 7 Celery (1 p.m. report)
Dairy Products
Noncitrus Fruits & Nuts - Annual
- 9 Crop Production
- 10 Farm Labor
- 13 Turkey Hatchery
- 15 Milk Production
- 16 Vegetables
- 21 Catfish
- 22 Cold Storage
- 23 Eggs, Chickens & Turkeys
Mink
- 24 Cattle
Cattle on Feed
Livestock Slaughter
- 29 Peanut Stocks & Processing
- 30 Catfish Production
Farm Numbers & Land in Farms
- 31 Agricultural Prices

Commodity Spotlight



A Sweet Year For U.S. Apple Growers

The U.S. apple industry polishes off the 1991/92 marketing year with a record-high crop value. Bright domestic demand and exports, combined with moderate production in Washington, sent grower prices for fresh apples to record levels every month since last September. Can the apple industry look forward to above-average receipts again in 1992/93? Can the industry top the 1991/92 season?

Six states—Washington, California, Michigan, New York, Pennsylvania, and Virginia—produce more than 80 percent of the total U.S. apple crop. Over half (57 percent) of the U.S. apple crop is marketed fresh. Washington is able to produce high-quality fresh-market apples because of its ideal climate—relatively dry in spring and summer with plenty of sunshine. Washington usually produces more than half of the U.S. fresh-market apple crop, while California produces 5 or 6 percent.

Michigan is among the top three apple producing states, but a higher proportion of its crop is used for processing. While Michigan has a transportation cost advan-

Commodity Spotlight

tage over Washington with a better location for the eastern domestic market, higher humidity and moisture during the summer make it more difficult to produce higher quality fresh-market fruit.

Washington sells twice as many apples for fresh use as for processing, while the reverse is true for Michigan. And New York splits its production evenly between fresh and processing apples. Processing uses include juice (22 percent of total apple use), applesauce (15 percent), frozen slices (3 percent), and dried and other products (3 percent).

Apples can be stored and marketed fresh throughout the year. Controlled-atmosphere storage—in which the oxygen content of the air is lowered—allows apples to be stored for up to a year without substantial reduction in quality. Fresh apples stored in conventional cold storage facilities are typically sold by late January, while the quality still meets fresh-market standards.

An Apple a Day ...or Two

U.S. per capita consumption of apples and apple products has grown almost 2 percent per year since 1970, partly because apple juice consumption tripled over this period. On the other hand, per capita canned apple consumption showed no growth, while fresh apple consumption grew almost 1 percent annually since 1970—the same increase all fresh fruits enjoyed. Apples have held onto their share of fresh fruit consumption, while banana, strawberry, and grape consumption increases have more than offset declines in fresh citrus.

The growing availability and popularity of nontraditional fruits like mangoes and other tropicals represent additional competition for fresh apples. Relative prices for these nontraditional fruits have declined, making them more price competitive with traditional fruits like apples.

Consumers weigh quality as well as price when shopping for fruit, and all fruits, including apples, compete for a piece of the growing fresh fruit consumption pie. Consumers may be willing to pay more

for apples, and for fruit in general, if their knowledge of the nutritional health benefits of the products increases. A recent consumer survey found that price is not always the highest priority for apple consumers. High fiber and vitamin content, and low calories, are also important factors in consumers' purchase decisions. This year, domestic apple consumption appears to be keeping pace with last year's high demand, despite higher prices.

Emphasizing quality over price as a way to boost sales seems to be an appropriate marketing strategy for the industry, especially since fresh apple prices have risen sharply (in real terms) in the last few years. This was the approach taken by the Washington industry a few years ago when it identified the importance of firmness standards that lead to crisper fresh apples. After the state took steps to increase those standards, initial grumbling by growers turned into praise. Many growers now feel the change helped increase demand for fresh apples.

Changing lifestyles have increased demand for convenience and have altered

shopping patterns. As a result, new market opportunities for fresh apples now include convenience stores, club membership stores, and even nonfood outlets like hardware and lumber stores. Apple sales for fundraising by schools and service groups and food-service markets also show potential.

Apple promotion is getting an extra push from the produce industry's campaign to double U.S. per capita demand for fruit and vegetables by the year 2000. Associated advertisements and improved nutrition information and dissemination should have a positive effect on demand for fruit, including apples.

U.S. Apples Take a Bite Out of Europe . . .

The U.S. produces about 10-15 percent of the world's apples and according to preliminary data, ranked as the second-largest fresh apple exporter after France in 1991/92. The U.S. is a net exporter of fresh apples but is also a large net importer of apple juice. Net exports of fresh

Delicious Apples Are Grown Largely in the West, But the East Leads in McIntosh Output

Variety	... U.S. Region ...		
	East	Central	West
Percent of output			
Granny Smith	0.0	0.0	100.0
Newtown	0.0	0.0	100.0
Gravenstein	0.0	0.0	100.0
Red Delicious	15.6	5.0	79.4
Golden Delicious	23.5	7.8	68.7
Winesap	32.4	13.5	54.1
York	100.0	0.0	0.0
R.I. Greening	85.2	14.8	0.0
Cortland	83.3	16.7	0.0
Empire	83.3	16.7	0.0
Stayman	83.3	16.7	0.0
McIntosh	75.2	24.8	0.0
Rome	58.0	15.9	26.1
Jonathan	12.0	71.1	16.9
Northern Spy	29.2	70.8	0.0
Idared	50.0	50.0	0.0
All others	42.7	27.3	30.0

East: NY, PA, VA, NC, WV, MA, ME, NJ, MD, NH, VT, CT, SC, GA, DE, RI. Central: MI, OH, IL, IN, WI, MO, MN, KY, TN, KS, IA, AR. West: WA, CA, OR, ID, CO, UT, AZ, NM.
Source: International Apple Institute

Commodity Spotlight

apples have been increasing in recent years, after dropping in 1985, when the dollar exchange rate was high relative to major trading partners, and Washington had a poor crop. Since 1985/86, the proportion of U.S. apples marketed outside the country has increased from about 8 percent of fresh apple marketings to almost 15 percent in 1990/91, with expectations for a further increase in 1991/92.

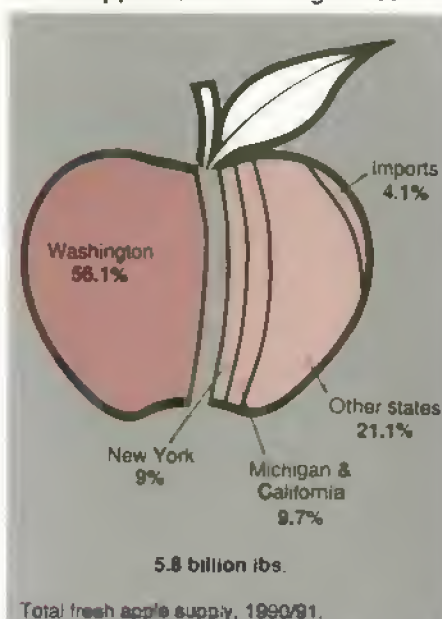
The big news during the 1991/92 marketing year was that exports to Europe doubled, mostly because of a short crop in France and in some other European countries. The increased export demand diverted supplies away from the U.S. domestic market and largely explains why grower prices rose 20 percent in 1991/92. The U.K. will likely remain a significant buyer, but substantial long-term trade with the European Community (EC) is limited because of its substantial apple production base and import tariffs.

High-volume markets that show promise include east and Southeast Asia, especially Hong Kong and Taiwan. Phytosanitary regulations currently prohibit apple imports into Japan, but research and negotiations are underway to open that market.

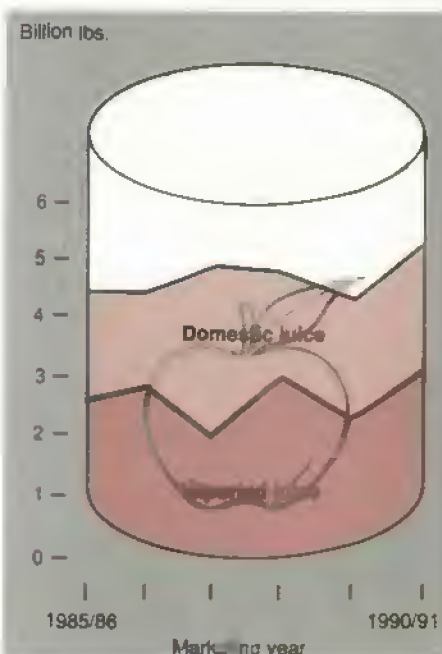
More liberalized trade policies in several countries have helped boost U.S. fresh apple exports in recent years. Since 1988, the Philippines, Indonesia, Thailand, Mexico, Venezuela, and Sweden have reduced trade barriers and are fast becoming significant markets for U.S. apples. Assistance through USDA's Market Promotion Program (MPP) has also helped state apple associations develop export markets.

The industry continues to adapt to changing consumer preferences by supplying markets with the desired varieties. Many Gala apples from Washington, for example, are sold to Taiwan rather than domestically—Taiwan prefers their sweeter taste. Still, as in most domestic and international markets, Red Delicious holds the lead in apple shipments to Taiwan. East Asian consumers also favor Fuji apples, while Granny Smiths have been very popular in the United Kingdom.

U.S. Consumers Get Most of Their Fresh Apples from Washington...



...but Most of Their Apple Juice from Imports



...but Juice Imports Flow into U.S.

Crisp growth in U.S. apple juice consumption since 1970 has been fueled in large part by imported concentrate, but also by higher orange juice prices following several successive freezes that damaged the Florida citrus crops in the

1980's. More than half of the apple juice consumed in the U.S. during the 1980's was imported, up from about 25 percent in the previous decade.

Imports from Argentina and Chile have more than doubled in the last 5 years, and imports from Hungary, Poland, and other East European countries are also increasing. However, economic development in Eastern Europe should create domestic market opportunities and may limit future exports from Europe to the U.S. In all but 1 of the last 6 years, U.S. imports exceeded estimated domestic juice output, and in short crop years in the U.S., imports made up almost two-thirds of total juice supply.

During the last 2 years, world apple crop shortfalls have helped strengthen prices for processing apples. In 1990/91, prices for juice apples were more than 50 percent higher than the previous year, a scenario likely to be repeated as the 1991 marketing year draws to a close.

Apple juice processors must also compete with larger juice companies that heavily promote popular tropical and cranberry juice blends. In response, the largest apple processors have embarked on new products like juice blends, aimed at the less traditional adult market that prefers a less sweet taste. And at least one company plans to introduce a juice that will be clearer, and "look and taste" more like fresh apple juice.

Growth in Apple Acreage Slows

Weather is the most important supply factor in any single year, especially during the critical blossoming and fruit-setting periods. Extremely hard winter freezes can reduce production, as last year in Washington. Over several years, the number of bearing acres, and thus future production, is also influenced by orchard planting and removal.

Because apple orchards have a commercial life of 20 to 40 years, the industry is frequently concerned about the potential for long-term overproduction and low prices. Interyear price fluctuations have a smaller immediate impact on the

Commodity Spotlight

production of perennial crops than of annuals—it can take 9 years from the time an apple grower plants an orchard until full commercial production is reached. Plantings spurred by increasing prices in the late 1970's were partially responsible for the 1987 record apple crop.

U.S. apple-bearing acreage actually declined during the first half of the 1970's but then began inching upward, growing at less than 1 percent a year until the mid-1980's. After 1985, annual apple-bearing acreage growth exceeded 2 percent as heavy plantings in the late 1970's came into full production.

Although growth in acreage has slowed to less than one-tenth of a percent after peaking in 1989 at 3.3 percent, new orchards and replantings have greatly added to the potential supply in the early 1990's and beyond. In recent years, production shortfalls due to bad weather have generally offset the effects of increases in bearing acreage, so actual production has not surpassed the record 1987 crop. But recent and somewhat untested acreage gains, combined with excellent weather, could produce a record crop in the near future.

The apple industry expects to have a sufficient supply to meet growing demand in the next few years. Record-high prices this year may encourage even more plantings and further increase the U.S. apple supply early in the next decade.



What's Ahead: High-Density Planting

Technological and managerial changes, including the conversion to high-density apple orchards, have increased yields almost one-third from 1970 to 1990. Future production gains are likely, as more and more old blocks of trees are replaced with higher density plantings.

Research by the International Apple Institute (IAI) on chemical use in 1989 and 1990 showed average application rates of EBDC fungicides were well below the maximum recommended by the manufacturer, and preharvest application intervals were longer than the minimum recommended. Results of IAI's research were used to develop new label recommendations that could reduce the calculation of risk associated with use of EBDC's on apples. Challenges of the future also include dealing with waxing apples—a practice that has raised concerns among food safety advocates.

A larger U.S. crop expected this fall and lower exports to the EC will likely drop apple prices from the highs of 1991/92, but it will also help the U.S. apple industry stay competitive, both in maintaining fresh-market exports and curbing apple juice imports. Marketing the increasing apple supply to meet not only domestic and foreign demand for high-quality fruit but also particular varietal preferences, will be necessary to sustain satisfactory returns for U.S. apple growers. [Dennis Shields (202) 219-0883] **AO**

World Agriculture & Trade



Photo: Port of New Orleans

U.S. Exports— A Decade of Differences

U.S. agricultural exports in fiscal 1992 are expected to be the second highest ever, only \$2.8 billion below fiscal 1981's record \$43.8 billion. In fiscal 1992, the value of exports is expected to reach \$41 billion, more than offsetting 1991's 6.2-percent decline. With the recovery of U.S. export value in recent years has come a transformation in the type of goods traded and the key U.S. markets.

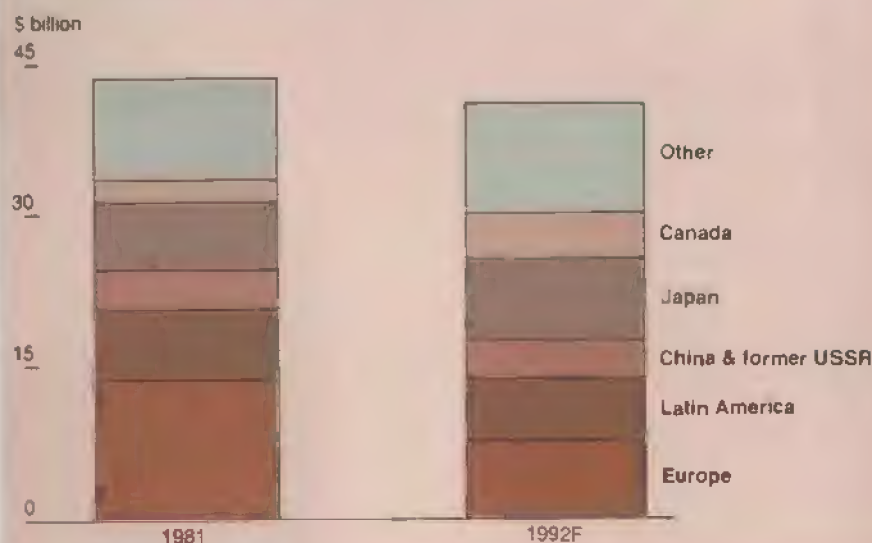
Three developments underscore the broad changes in U.S. agricultural exports between 1981 and 1992—the decline in export volume, the weakness in the prices and value of bulk exports, and the growth of high-value product (HVP) exports.

Fiscal 1992's forecast export volume, at 140 million tons, is 14.1 percent below 1981's peak of 163 million. The lower volume is entirely due to reductions in the volume of bulk product exports like grains, oilseeds, and cotton. At the beginning of the 1980's, the volume of U.S. agricultural exports exceeded 160 million metric tons, with grain accounting for about 120 million. Fiscal 1992's

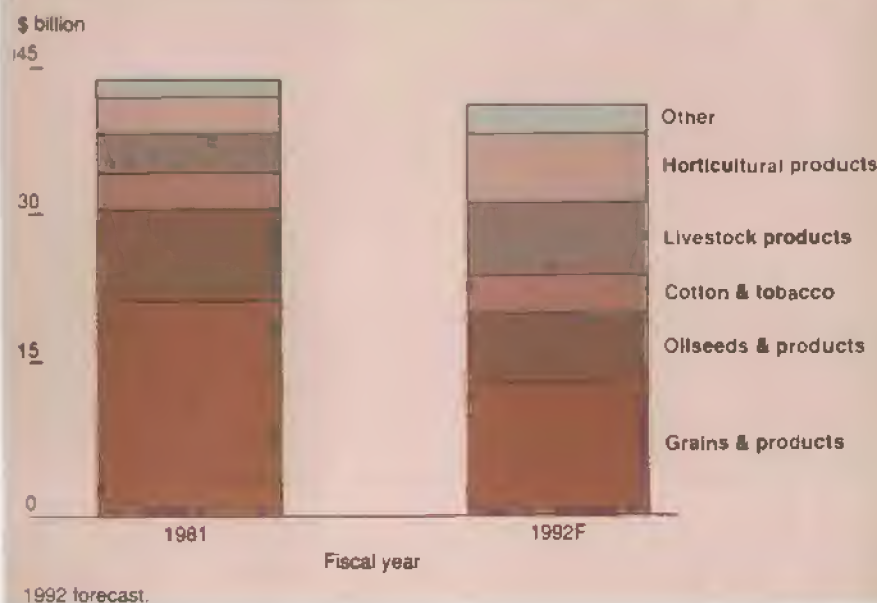
World Agriculture & Trade

U.S. Agricultural Exports After a Decade:

Europe Is No Longer the Major U.S. Market...



...and the U.S. Commodity Mix Has Changed



forecast grain exports, at 98 million tons, are 18.3 percent below 1981.

The decline in the volume of bulk exports is only one side of the story—the prices of most bulk exports have fallen substantially. In fact, lower prices account for more than falling volume in bringing down the value of U.S. bulk exports since 1981.

HVP exports grew sharply in the 1980's, and now dominate U.S. agricultural exports. High-value products are those that have received additional processing beyond the farm gate or represent a higher priced segment of a group of products. Perhaps the simplest definition of HVP exports is that they are agricultural exports other than raw grains, oilseeds, cotton, and tobacco. U.S. exports of high-value products have been achieving record levels in nominal terms for several years, but U.S. HVP exports in 1992 are

expected to reach another record, even after adjusting for inflation.

During the first half of the 1980's the real value of HVP exports fell 25 percent as the U.S. dollar appreciated in value, making U.S. exports more expensive to foreign importers. Since the mid-1980's, growth in the value of HVP exports has exceeded the rate of inflation virtually every year, but only by 1992 is cumulative real growth expected to enable real value to recover completely.

U.S. Grain Trade Weakened in 1980's

U.S. grain exports account for most of the decline in the value of bulk product shipments—and the total U.S. export volume—since 1981. The deterioration in U.S. grain exports coincides with a significant change in the European Community's (EC) grain trading. A net importer in 1981, the EC then became a significant grain exporter.

Before fiscal 1981, the 12 current members of the EC together had imported as much as 33 million tons (net basis) of grain in a single year, but by 1981 this had fallen to about 8 million tons. By the mid-1980's, the EC had become a net exporter, and in recent years has achieved annual net exports of 23-25 million tons.

High domestic grain prices, shielded by tariffs extended to each new member of the Community, drove EC consumption down 8 percent and production up 16 percent between 1981 and 1992. Emerging surpluses in that period drove the change from net imports to exports, a 30-million-ton shift against the U.S. and other non-EC exporters.

In fiscal 1981, the U.S. exported 22 million metric tons of grain and products to Western Europe. By 1991 this had fallen below 13 million, and is expected to continue falling in fiscal 1992. The emergence of the EC as a grain export competitor also resulted in lost sales in other markets, such as the Soviet Union and the Middle East.

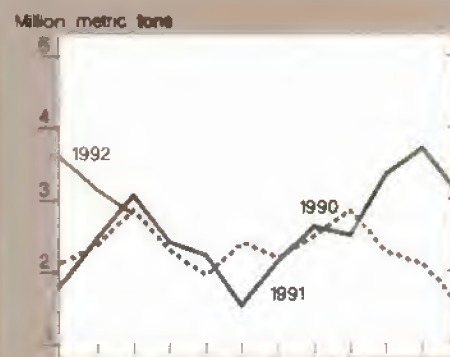
U.S. Trade Indicators

World Agriculture & Trade

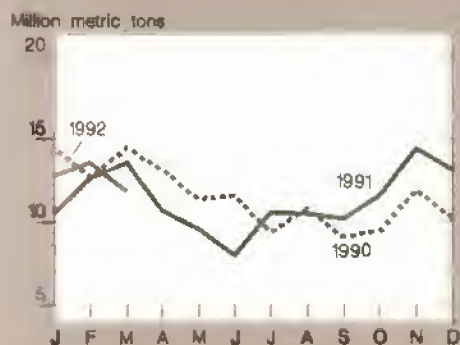
U.S. agricultural trade balance



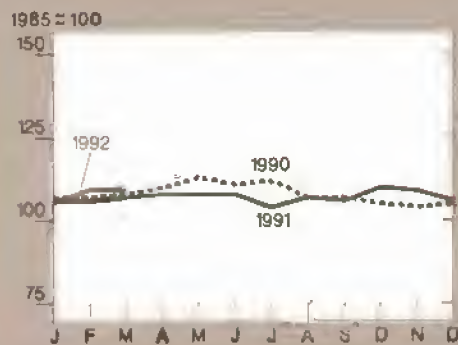
U.S. wheat exports



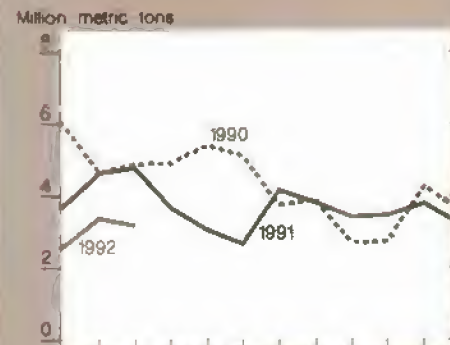
Export volume



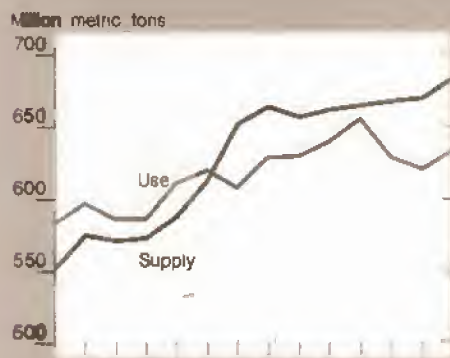
Index of export prices



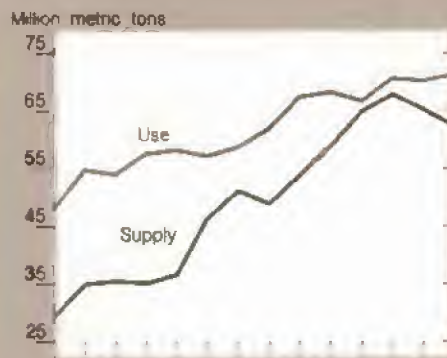
U.S. corn exports



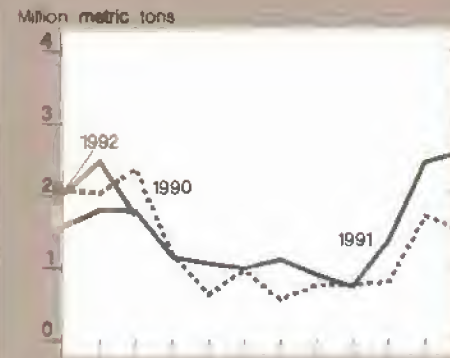
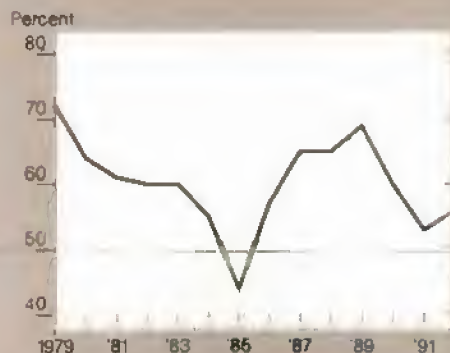
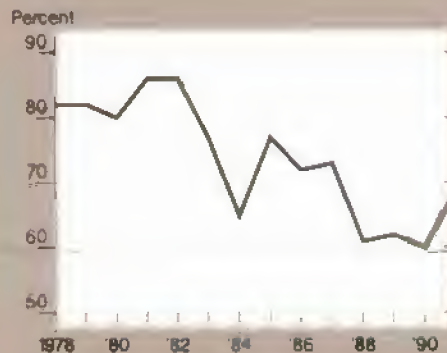
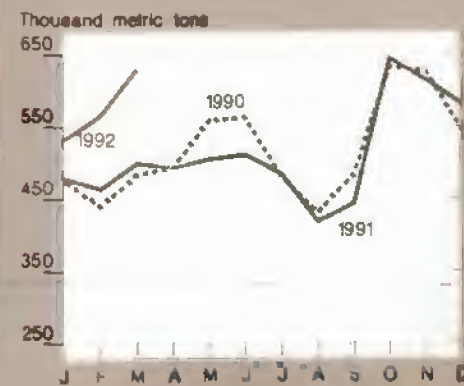
Foreign supply & use of coarse grains



Foreign supply & use of soybeans



U.S. soybean exports

U.S. share of world coarse grains exports^{1,2}U.S. share of world soybean exports^{1,2}U.S. fruit, nut & vegetable exports³¹Excluding intra-EC trade ²October-September years ³Includes fruit juices

World Agriculture & Trade

Similarly China, between 1981 and 1992, reduced its grain imports from the U.S. and increased its exports to other countries. China's net grain imports fell by about 7 million tons during this time, as economic reforms encouraged increased grain production.

Total imports in 1992 by the former Soviet Union are not expected to differ significantly from levels observed 11 years ago, but the terms of trade are now drastically different. At the beginning of the 1980's, the Soviet Union and other oil exporters earned large trade surpluses that enabled them to import food and other products on a cash basis.

Oil earnings also permitted petrodollars to be "recycled" through lending to developing countries, sustaining debt-driven imports. In fiscal 1981, just prior to the onset of the 1980's debt crisis, U.S. agricultural exports to the developing world peaked at \$16.9 billion.

In 1992, the former Soviet Union is in a position similar to that faced by many developing countries during the earlier debt crisis. Strapped for hard currency, and saddled with an agricultural base eroded by years of subsidizing industrial development, the former Soviet Union now depends on credit arrangements to facilitate trade, with attendant pressures of rescheduling, repayment, and the need for economic reforms.

For many developing countries, the debt crisis of the early 1980's has ended, with the reversal of capital flight, booming stock markets, and renewed acceptance in commercial credit markets. Developing economies are expected to recover in 1992, to a 5-percent growth in GDP for the first time in more than a decade.

On the other hand, the countries of Eastern Europe and the former Soviet Union continue to face contracting economies and a restricted ability to import. While Eastern Europe's imports from the U.S. exceeded \$2 billion in fiscal 1981, only \$200 million is forecast for 1992. U.S. sales to the former Soviet Union are expected to rise in fiscal 1992, but will depend largely on credit arrangements, and will remain below record.

For nearly 30 years, Japan has been the largest market for U.S. agricultural products. In 1983, Japan replaced the EC as the largest customer for U.S. grains and products, but Japan has been unable to provide a basis for further growth in U.S. bulk exports. Japan's imports of grain, which amounted to 24 million tons in 1981, stood at 27 million in 1992. U.S. exports have held about 70 percent of the total, but Japan's grain consumption and imports have fallen slightly in recent years as a strong yen and increasing import liberalization have led to increased imports of meat in place of coarse grains for livestock raising.

Bulk Product Prices Fall

The large shift in the EC's and, to a lesser extent, China's grain trade, along with a prolonged depression in debtor country imports, prevented the U.S. from sustaining the volume of its bulk product sales between 1981 and 1992. Accompanying the reduction in export volume has been a marked fall in prices for bulk exports since the early 1980's.

In 1981, grain import demand was expected to continue expanding rapidly, while world production grew more slowly. Consequently, prices for grains and other bulk commodities reached record highs—well above prices expected in fiscal 1992. Lower prices, more than lower volume, account for most of the 11-year decline in value of U.S. bulk exports since 1981. If the U.S. could meet its 1992 export volume forecasts for bulk commodities at 1981 prices, exports would be \$6.2 billion higher than currently forecast. But at 1992 expected prices, boosting export volumes to 1981 levels would result in a gain of only \$3.6 billion.

HVP's Dominate U.S. Export Growth

HVP exports have escaped the problems faced by bulk exports—dependence on developing and former Eastern bloc countries for sales, and a massive shift in the EC's export position. The heterogenous

nature of HVP's makes broad price comparisons difficult, but it is unlikely that HVP prices have declined as have those of bulk products. Similarly, since about 25 percent of U.S. HVP exports are reported in units other than weight (e.g., head of cattle, liters of juice), tracking the volume of trade is difficult. However, the volume of U.S. HVP's reported in such units surpassed 1981 levels several years ago.

Favorable U.S. exchange rates, relatively strong growth in many developed countries, market promotion efforts, and trade liberalization measures such as the U.S.-Canada Free Trade Agreement and the U.S.-Japan Beef and Citrus Agreement have boosted U.S. HVP exports. For example, Japan's consumption and imports of red meats and poultry meats tripled between 1981 and 1991, and further growth is expected in 1992. Japanese imports of U.S. meat rose sharply after 1988, but slowed in recent years, and actually fell in 1991 as Japan replaced its beef import quotas with a 70-percent tariff. The tariff is being reduced to 60 percent in 1992, and increased imports of U.S. meats are likely.

Higher HVP exports have sustained the total value of U.S. agricultural exports to developed countries, largely offsetting reduced bulk exports to the EC. Indeed, the EC remains the largest market for U.S. HVP exports. Higher HVP shipments to the EC, Japan, and Canada are expected to drive U.S. exports to developed countries over \$21 billion, surpassing 1981's record \$20.9 billion.

Bulk product sales continue to account for most U.S. agricultural exports to developing countries in east and Southeast Asia, but increased HVP exports are also enhancing the importance of these markets. The economic boom in the region has created a new class of economies—the Newly Industrialized Countries—with incomes that permit increased consumption of HVP's.

U.S. agricultural exports to Asia—excluding Japan, China, and the Middle East—are expected to reach \$6.7 billion in fiscal 1992. While less than record, this is up from the \$5.4 billion shipped in fiscal 1981.

World Agriculture & Trade

Although shipments to developing Asian countries rose between 1981 and 1992, total exports forecast for all developing countries in fiscal 1992 remain lower, at \$15.6 billion, \$1.3 billion below 1981's peak. Lower shipments to South America and Sub-Saharan Africa are offsetting the gains in Asia. However, three countries—Venezuela, Brazil, and Nigeria—account for most of the decline between 1981 and 1992. Economic growth and progress in settling debt issues, could begin to restore imports to these and other developing countries.

Trends between 1981 and 1992 point to the increasing importance of both HVP sales worldwide and exports to developing countries. U.S. nonagricultural exports to developing countries rose more sharply than exports to developed countries in 1991 for the first time since 1981. Export gains continued to favor developing countries during the first quarter of 1992, raising expectations that these will be expanding markets for increased U.S. export sales in the future. *[Stephen MacDonald (202) 219-0822] AC*

Upcoming Reports from USDA's Economic Research Service

The following are July release dates for summaries of the ERS reports listed. Summaries are issued at 3 p.m. Eastern time.

July

- 14 China
- 15 Livestock & Poultry
- 16 Vegetables & Specialties Yearbook
- 17 Agricultural Outlook
- 21 Dairy
- 22 Rice Yearbook
- 23 Oil Crops Yearbook

Food & Marketing



Food Prices—No Fuel For Inflation

A rise in food prices often attracts more attention than price rises for other goods and services. The good news for consumers this year is that the Consumer Price Index (CPI) for food is expected to average only 1 to 3 percent above 1991, slightly lower than the 2-4 percent reported earlier. The revision reflects smaller-than-expected increases in fruit and vegetable prices during the first quarter.

Weather during the first quarter of 1992 was mild relative to the previous 2 years. Last year, a hard freeze in California damaged citrus crops and delayed harvest of many fresh vegetables. In 1990, a hard freeze in Florida caused similar damage to crops. In both years, reduced supplies caused fruit and vegetable prices to increase sharply. This year, freeze damage was not a problem. Heavy rains in California and Mexico temporarily slowed vegetable harvests, causing prices to rise in February and March. But lower fruit prices offset rises in vegetable prices, as California's orange production made a remarkable recovery following last year's freeze damage.

Major factors holding prices down this year are larger supplies of foods, particularly red meats, and a slow economic recovery, limiting demand pressure. Expanded production of red meat, particularly pork, combined with continued increases in poultry production, will lead to lower farm prices. As a result, neither farm prices nor input prices at the processing and distribution level will have much effect on increasing food prices in 1992.

The slow recovery will keep the inflation rate moderate, curbing rises in costs of processing and distributing food. Growth in real disposable personal income will only offset last year's decline, minimizing any additional increase in consumer food demand in 1992.

A Time-Lapse View Of Food Prices

Consumers tend to be more aware of food price changes because food is purchased more frequently than other goods, and consumers tend to see food as a major cause of overall inflation. In 14 of the past 22 years, the Consumer Price Index (CPI) for food actually rose at a slower rate than the CPI for all goods. The difference was small—changes in the food CPI over that entire period were nearly equal to changes in the all-item CPI, the average of price changes for all retail goods and services. In 1991 the food CPI was 3.48 times 1970's level, while for all items, the CPI was 3.51 times 1970's level.

In order to get a feel for the purchasing power of a dollar in 1991 relative to 1970, each CPI category has been set equal to \$1 in 1970—as if \$1 worth of that item could be purchased. Changes are accumulated each year through 1991. For example, transportation that cost \$1 in 1970 cost \$2.22 in 1980 and \$3.30 in 1991.

Items in the CPI market basket changed at different rates. For example, \$1 of medical services in 1970 cost \$5.21 in 1991, while \$1 of clothing in 1970 cost only \$2.17 in 1991. Of the major CPI categories, medical, energy, and housing prices increased more than food prices

Food & Marketing

Food & Marketing Indicators

CPI: Total food^o

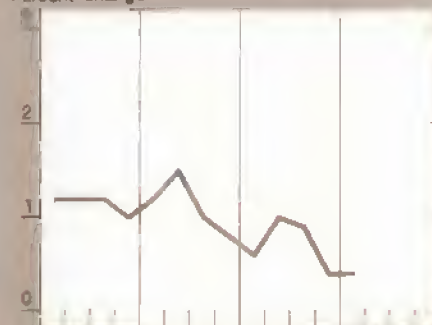
Percent change

CPI: Food at home^o

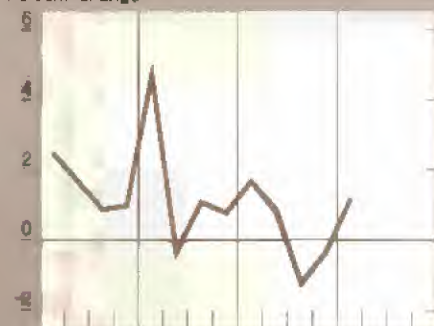
Percent change

CPI: Food away from home^o

Percent change

Retail cost of food¹

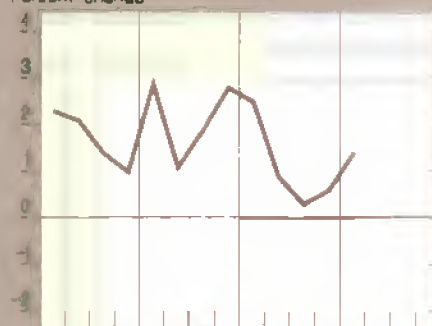
Percent change

Farm value of food¹

Percent change

Farm-retail spread¹

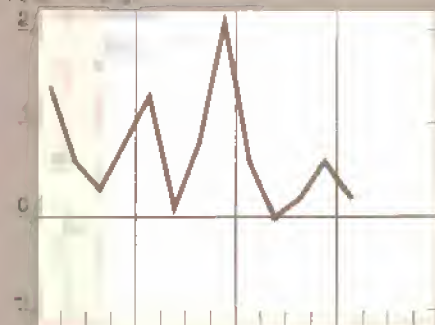
Percent change

Farm share of retail cost¹

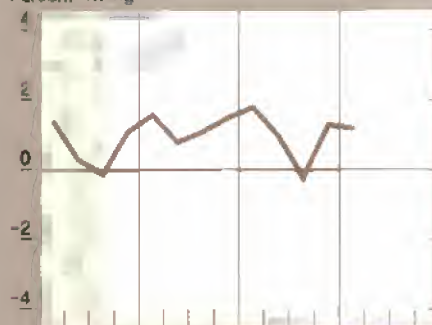
Percent

Food marketing cost index²

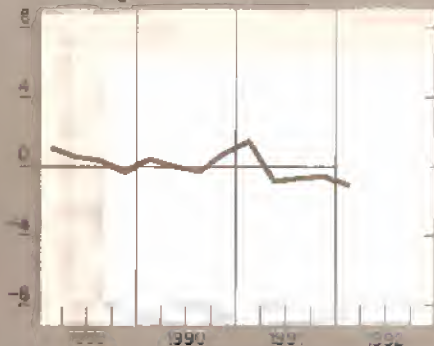
Percent change

Index of hourly earnings^{3,4}

Percent change

Index of packaging prices⁴

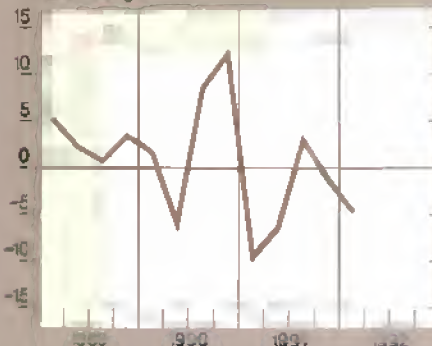
Percent change

Index of rail freight rates⁴

Percent change

Index of energy rates⁴

Percent change

^oCPI unadjusted. ¹Index based on market basket of farm foods. ²Index of changes in labor, packaging, transportation, energy, and other marketing costs.³In food retailing, wholesaling and processing. ⁴Component of food marketing cost index.

Housing Is the Major Contributor to Consumer Price Increases Since 1970

Year	Medical	Energy	Housing	Food	Transportation	Entertainment	Apparel	All-Item CPI
<i>Dollars</i>								
1970	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
1975	1.40	1.65	1.39	1.53	1.34	1.31	1.22	1.39
1980	2.20	3.37	2.23	2.21	2.22	1.76	1.54	2.12
1985	3.34	3.98	2.96	2.69	2.84	2.27	1.77	2.77
1986	3.59	3.46	3.05	2.78	2.73	2.35	1.79	2.82
1987	3.83	3.47	3.14	2.90	2.81	2.43	1.87	2.93
1988	4.08	3.50	3.26	3.02	2.93	2.53	1.95	3.05
1989	4.39	3.70	3.38	3.19	3.04	2.66	2.00	3.20
1990	4.79	4.00	3.53	3.38	3.21	2.79	2.10	3.37
1991	5.21	4.02	3.67	3.48	3.30	2.91	2.17	3.51
<i>Percent of CPI increase (1970-91)*</i>								
	10.0	8.5	43.3	15.9	15.9	3.7	3.7	100.0

*Price increases weighted by each item's share in the total market basket.

since 1970. Prices for transportation, entertainment and apparel increased less. The increase in consumer food prices was very near the average increase for all items.

Among the major CPI categories, food has not been the primary contributor to inflation over the last 22 years. Differences in the individual categories, however, are not enough to show which CPI category has contributed most to inflation. The relative importance of each

category in an average consumer's budget must be considered.

For all items in the CPI, housing costs account for 41.5 percent of the total market basket, transportation 17 percent, food 16 percent, energy 7.4 percent, medical 6.7 percent, apparel 6.1 percent, and entertainment 4.4 percent. Applying these weights shows that the major contributor to inflation has been housing, accounting for 43 percent of the total increase over the 22-year period. Food and transporta-

tion accounted for about 16 percent, and medical costs about 10 percent.

Within the food CPI, care should be taken in drawing conclusions about relative price trends. This is particularly true for perishable commodities whose prices can be highly volatile. An example would be fresh fruit. The fresh fruit CPI rose sharply in 1991 because of the freeze in California that damaged the orange crop. The rise in that index in 1991 was an aberration, and the index is expected to decline in 1992. Such

Cereal and Bakery Products Account for Much of the Increase in Food Prices Since 1970

Year	Cereals & bakery	Beef & veal	Pork	Poultry	Fish	Eggs	Milk	Fresh fruit	Fresh vegetables	Proc. fruit	Proc. vegetables	Sugar & sweets	All food CPI
<i>Dollars</i>													
1970	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
1975	1.70	1.42	1.70	1.50	1.72	1.26	1.37	1.46	1.41	1.55	1.70	2.14	1.53
1980	2.26	2.26	1.80	1.76	2.80	1.35	1.87	2.38	2.01	2.14	2.27	2.97	2.21
1985	2.91	2.26	2.18	2.00	3.43	1.39	2.05	3.27	2.63	2.85	2.85	3.47	2.69
1986	2.99	2.27	2.36	2.15	3.75	1.48	2.03	3.33	2.73	2.77	2.85	3.57	2.78
1987	3.09	2.44	2.56	2.12	4.15	1.39	2.07	3.71	3.09	2.88	2.93	3.64	2.90
1988	3.29	2.58	2.48	2.27	4.39	1.43	2.12	4.02	3.28	3.18	3.07	3.74	3.02
1989	3.57	2.74	2.49	2.49	4.59	1.81	2.29	4.28	3.63	3.28	3.39	3.91	3.19
1990	3.77	2.96	2.86	2.49	4.69	1.89	2.53	4.80	3.84	3.57	3.48	4.09	3.38
1991	3.93	3.04	2.95	2.47	4.74	1.85	2.45	5.45	3.92	--	--	--	4.48
<i>Percent of all-food price increase (1970-91)*</i>													
	15.8	9.2	4.9	3.4	5.2	0.0	8.6	9.2	6.0	3.7	2.9	4.3	100.0

*Price increases weighted by each item's share of total market basket. Does not add up to 100 percent because not all categories are included.

-- Not available.

Food & Marketing

considerations are essential when looking at short-term trends.

The same procedure—starting with \$1 of each food category and following price changes through 1991—can be used to see which food category has contributed most to the rise in the food CPI. Weighting each food category showed that cereals and bakery products contributed the most to increases in the food CPI. Cereals and bakery products that cost consumers \$1 in 1970 rose to \$3.93 for the same amount by 1991. Most of the rise in prices of cereal and bakery products has come from increased costs for processing and marketing. In recent years, however, consumer demand for high-fiber foods has added to demand for breakfast cereals and bran products.

Fresh fruits rose the most—to \$5.45—although they make up a smaller share of consumer food expenditures than cereals and bakery products. What products rose the least? Eggs—\$1 worth of eggs in 1970 only cost \$1.85 by 1991—poultry, pork, and milk prices stayed relatively low, all under \$3 by 1991. (Ralph Parlett (202) 219-0870) **AO**

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Policy



Pressures for Policy Reform: The U.S. & EC

The two articles that follow look at the most recent efforts by the U.S. and the EC to give their domestic agricultural programs more market orientation. Over the past decade, many industrial economies have felt pressure to point domestic agricultural programs in a more market-orientated direction. Pressures have percolated from both foreign and domestic sources—from complaints of international markets being undermined by unfair trade practices, to concerns over mounting budget outlays and commodity stockpiles.

U.S. domestic programs put in place at the start of the 1980's left U.S. producers unable to respond to dramatically different—and rapidly changing—world market conditions a few years later. U.S. loan rates then acted as a price umbrella for several foreign producers, encouraging production that added further pressure on stocks and prices. The U.S. price umbrella was among the factors that helped transform some foreign markets from U.S. customers to U.S. competitors.

In the mid-1980's, the U.S. took steps toward a stronger market orientation with

the Food Security Act of 1985. By the start of the 1990's, the U.S. had secured the foundation with the Food, Agriculture, Conservation, and Trade Act of 1990 (the 1990 farm act). Meanwhile, the EC found itself in a situation mirroring the U.S. years earlier—saddled with large surpluses and forecasts of record budget outlays. The situation in the EC was enough to sound the alarm again for reform of the Common Agricultural Policy (CAP).

U.S. Moves in Market-Oriented Direction

In the 1980's, world recession, an appreciating dollar, high real interest rates, and the farm financial crisis had a profound impact on U.S. agriculture and the effectiveness of agricultural policy. Market conditions deteriorated sharply and rapidly for U.S. farmers; commodity price support levels were effectively providing a price floor—for both U.S. and foreign producers. Large stocks, forfeitures of commodity loans to the government, and escalating budget outlays resulted, as farm financial stress mounted.

The Food Security Act (FSA) of 1985 was crafted in a policy setting that demanded a change in direction for U.S. farm programs. Over 200,000 farms were considered financially vulnerable; grain carryover stocks stood at 69 percent of 1985-86 use; U.S. agricultural exports had dropped to \$26 billion for fiscal 1986, compared with the record \$44 billion set in 1981; and in fiscal 1986, farm program costs hit a record of almost \$26 billion.

The FSA took a step toward a more market-oriented farm policy that would better equip farmers to respond to economic and market signals. The legislation inaugurated marketing loans for some crops, lowered price supports and provided discretionary authority for their adjustment, reversed upward trends in income supports, froze program yields, and ushered in the Export Enhancement Program (EEP) to improve price competitiveness of U.S. exports.

Key Farm Program Terminology

Base acres—A moving average (5 years for wheat and feed grains; 3 years for cotton and rice) of the crop planted for harvest, plus land idled because of acreage reduction program (ARP) requirements.

Deficiency payment—A payment made to farmers participating in the wheat, feed grain, cotton, or rice programs. The payment rate is the difference between the target price and either the market price during a period specified by law or the loan rate, whichever is higher. The total payment is generally equal to the payment rate multiplied by the eligible acreage, multiplied by the program payment yield.

0/92—Allows wheat and feed grain producers to devote all or a portion of their maximum payment acreage to conserving uses and receive deficiency payments on that acreage. The program makes deficiency payments for at most 92 percent of a farm's maximum payment acreage.

50/92—Allows cotton and rice producers who plant at least 50 percent of their maximum payment acreage to re-

ceive payments on at most 92 percent of their maximum payment acreage.

Farmer-Owned Reserve (FOR)—A program for wheat and feed grain producers under which they may place eligible grain in farmer-owned reserve storage after maturity of their regular price support loans. The FOR is open to entry only under specified conditions, and under the 1990 farm act, has been open only to 1990-crop wheat.

Flex acres—Include both "normal" flex and "optional" flex acres. Under the 1990 farm act, participating producers can plant up to 25 percent of a crop's base acres to other crops (except fruits and vegetables) without a reduction in base. The Budget Reconciliation Act made a 15-percent reduction in payment acreage mandatory on normal flex. On the 10-percent optional flex, producers are eligible for deficiency payments only if they plant the base crop.

Loan rate—The price per unit of output at which the Commodity Credit Corporation provides loans to farmers, enabling them to hold crops for later sale.

Marketing loan—A marketing loan allows producers to repay price support loans at less than the announced loan rate when the world price for the commodity is less than the loan rate. Marketing loans are mandatory for oilseeds, upland cotton, and rice.

Price support loans—Loans made to wheat, feed grains, cotton, and rice program participants so that they can store crops during periods of low prices. The loans can later be redeemed if commodity prices rise sufficiently to make the sale of the commodity on the market profitable, or the farmer can forfeit the commodity to the Commodity Credit Corporation.

Program crops—Generally refers to wheat, feed grains (corn, sorghum, barley, and oats), cotton, and rice.

Target price—A price level established by law for wheat, feed grains, rice, and cotton. Farmers participating in the commodity programs for these crops receive deficiency payments based on target prices, and loan rates or market prices.

The 1990 farm act, as well as the subsequent Omnibus Budget Reconciliation Act of 1990 (OBRA), built on the foundations laid by the FSA. By the time the 1990 farm act was being debated, the policy setting had improved considerably since 1985: only half as many farms were considered financially vulnerable—100,000; grain carryover stocks had fallen to 30 percent of estimated 1990/91 use; agricultural exports had rebounded to \$40 billion in fiscal 1990, and farm program costs fell to \$6.5 billion in the same fiscal year.

The end of the 1980's saw other, broader initiatives to promote freer trade and to move U.S. agriculture toward greater market orientation. Those initiatives began with U.S. participation in the Uruguay Round of multilateral trade negotiations under the General Agreement on

Tariffs and Trade (GATT) and the U.S.-Canada free trade agreement (CFTA) implemented in 1989, and continue with current negotiations to extend a free trade arrangement south to include Mexico.

How is U.S. farm policy now operating to steer agriculture in a more market-oriented direction? In one respect, market orientation simply means farmers base production and marketing decisions on expected supply and demand conditions, including market prices. Observable measures of market orientation include the relation of support levels to market prices; loan activity (including loan volume, length of loan terms, and forfeitures); planting flexibility; and the amount of commodity eligible for income support. In each of these areas, the

1990 farm act and the OBRA solidified and extended the market orientation of the FSA.

In addition, outlays for farm support under the 1990 farm act and the OBRA are expected to be below what would have been spent under the FSA. Many observers associate smaller government outlays (less taxpayer support) with greater market orientation, although this relationship is not always the case. Policymakers, for example, could impose quotas that would restrict output and thus raise domestic prices without significant taxpayer outlays. Far from relying on the market, producers would have quotas dictated. Under such a policy, the costs are hidden in the higher prices paid by domestic and foreign consumers.

Policy

1990 Farm Act Offers Planting Flexibility

Among the most significant departures from farm legislation of the 1980's are the planting flexibility provisions in the 1990 farm act. In order to be eligible for price and income support, participants in the farm programs register their base acreage according to the program crop planted. Prior to the FSA, program benefits had been tied to base acres, and producers had incentives to expand program crop base, regardless of the market conditions for that crop.

Now, under the 1990 act, up to 25 percent of any participating program crop acreage base—called flex acreage—can be planted to any program or nonprogram crop except fruits, vegetables, peanuts, tobacco, wild rice, trees, and nuts. In calculating the base, the flex acreage is treated the same as original program crop acreage. The first 15 percent of flexible base acreage is called normal flex acreage (NFA), and the next 10 percent is known as optional flex acreage (OFA). With the addition of flex acres, planting decisions on 15-25 percent of the participating producer's base acreage will more likely be based on market signals.

To reduce budget outlays and help ensure that market signals, not government programs, influence production decisions, the OBRA reduced the acreage that would be eligible for deficiency payments. The maximum acreage eligible for payment is now 85 percent of the crop acreage base established for the crop, minus acreage idled under an acreage reduction program (ARP). Normal flex acres are not eligible for deficiency payments in most cases, regardless of the crop planted—including the original program crop. However, program crops and oilseeds planted on NFA are eligible for price support loans.

Optional flex acres (10 percent of base) planted to the original program crop are eligible for deficiency payments, but if any OFA are flexed to another crop, no deficiency payments are made on those OFA acres that year. As with NFA, program crops and oilseeds planted on OFA are eligible for loans under price support.

As an example, a producer with 100 acres of corn base would be eligible for deficiency payments on a maximum of 85 acres, provided a zero-ARP is in effect. (An ARP would reduce the acreage for payment further.) Even if the producer plants any of the 15 normal flex acres to corn, no deficiency payments would be made on those acres.

Now, suppose the farmer flexes another 10 percent of the corn base to another crop. If any of those 10 acres are planted to permitted crops other than corn, no deficiency payments would be made on those optional flexed acres. Flexing on NFA and OFA would leave the producer with 75 acres eligible for deficiency payments that year. Any optional flex acres planted to the original program crop would retain eligibility for deficiency payments.

If all of the program crop acreage base had been enrolled in 1991 programs, producers could have flexed a maximum of approximately 53 million acres in 1991. However, only 79 percent of the program crop base was enrolled and only a very small amount—approximately 7.3 million acres (14 percent of the total eligible)—was actually flexed to other crops. Soybeans took the majority, with about 4 million acres (mostly from corn base acreage). Another 195,000 acres were flexed to minor oilseeds, 690,000 to other nonprogram crops, and the remaining 2.4 million to program crops.

On these 7.3 million acres, producers apparently reacted to market signals and price expectations, and modified their plantings on the NFA and OFA. Relative prices for corn and soybeans in 1991, for example, favored soybean planting. Preliminary estimates released by USDA on 1992 program enrollment suggest that more acreage may be flexed in 1992—almost 8.3 million acres.

A Smaller Role for Target Prices

Under the 1985 FSA, the level of target prices used to determine deficiency payments could be adjusted downward. The 1990 farm act, however, prohibits the Secretary of Agriculture from reducing

target prices below 1990 levels, which are approximately 10 percent below 1985.

Holding target prices at their 1990 levels and prohibiting further reductions do not appear to increase the market orientation initiated by the FSA. However, in real terms—adjusting for inflation—target prices at their statutory minimums are declining while production costs will likely continue to climb. This combination, in concert with planting flexibility and frozen program yields, reduces the influence of target prices and income support on production decisions.

The amount of production capacity eligible for deficiency payments is another indication of the degree of market orientation. The combination of flex acres and fixed payment yields reduces the total output covered by target prices, and therefore, eligible for deficiency payments.

Based on the 1991 acreage reduction program levels, program enrollment, and base in the long-term conservation reserve, approximately 52 percent of U.S. potential corn output and 49 percent of potential wheat output was eligible for deficiency payments. Under the FSA, these figures would each have been significantly higher.

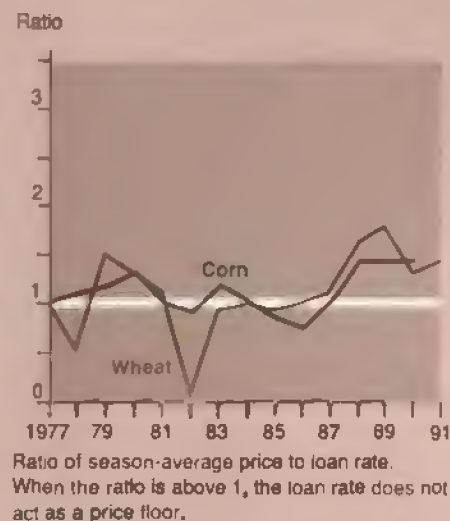
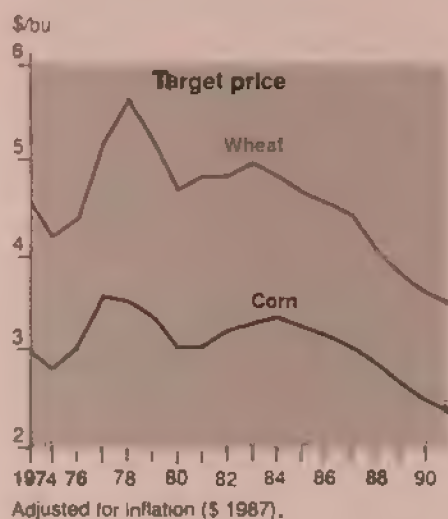
Loan Rates Stay in the Background . . .

Loan rates continue to be calculated based on a moving average of market prices. Under the FSA, the Secretary had discretionary authority to set the basic loan rates for wheat and feed grains between 75 and 85 percent of the 5-year moving average of the market price (excluding the highest and lowest prices). That authority was used to set basic loan rates at their minimum levels over the 1986-90 period.

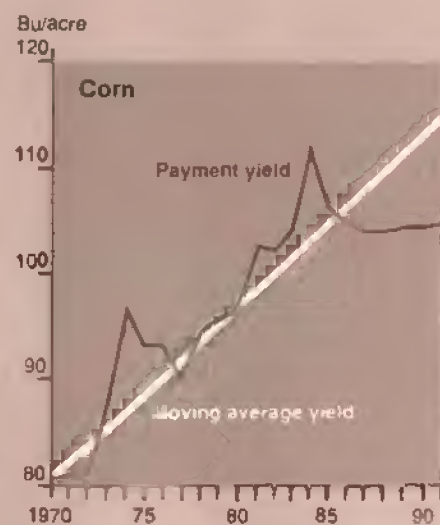
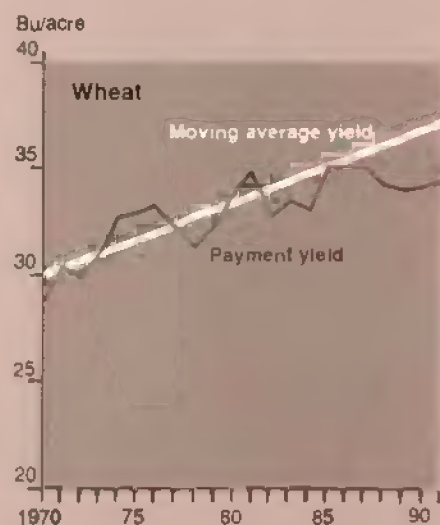
Under the 1990 farm act, the basic loan rates are calculated at 85 percent of the 5-year moving average of market prices (excluding highest and lowest). Additional downward adjustments are

Indicators of Increased Market Orientation in U.S. Agriculture

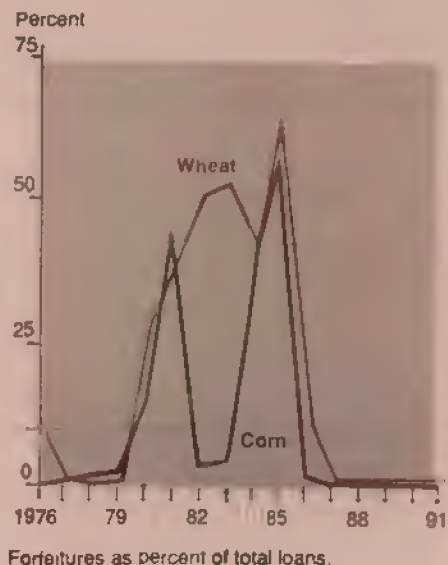
**Target Prices Decline,
While Loan Rates Recede as
a Floor for Market Prices. . .**



**. . . Payment Yields Are
No Longer Tied to
Average Yield Increases. . .**



**. . . And Producers Are Not
Forfeiting Crops Under Loan**



Policy

allowed; however, the legislation does continue to specify minimum loan levels. Adjustments to loan levels depend on projections for ending stocks relative to total use, and the discretionary authority of the Secretary to maintain competitiveness.

With the exception of rice, the 1991 and 1992 program crop loan rates rose from their 1990 levels. Changes in the loan rate formula earn mixed reviews for strengthening the market orientation of farm policy. An increase in the percentage of the moving average of market prices used for loan rate determination can be less market oriented when it establishes a higher price-floor level. However, by narrowing the gap between loan rates and target prices, higher loan rates could reduce the maximum deficiency payment rates and result in lower direct payments.

Continued discretionary authority to reduce loan rates also preserves the market-oriented initiative under the FSA. Moreover, it is not simply the absolute level of loan rates that reflects market orientation, but whether loan rates interfere with market prices. The formula remains tied to market prices, and so should reflect supply and demand conditions. The most recent changes to loan rates result in such a small increase that market orientation is not affected.

Loan rates that are tied to a moving average of market prices are more likely to stay in the background than legislated levels fixed without regard to market conditions. As long as market prices exceed loan rates, the price-support mechanism is not expected to determine or influence market prices.

From the mid-1970's through 1985, commodity loan rates essentially supported the market price. Loan rates were legislated at fixed levels, based on estimates of market prices and costs of production—estimates which resulted in levels that were too high, in retrospect. For corn and wheat, the ratios of the season-average market prices to loan rates equaled about 1.

However, since FSA, market prices have been high relative to loan rates; ratios

have climbed well above 1. Market conditions now have a greater influence on price determination than before the 1985 act, when loan rates determined the market price and acted as the effective price floor.

The 1990 farm act also implemented a marketing loan for soybeans and minor oilseeds—sunflowerseed, canola, rapeseed, safflower, flaxseed, mustard seed, and other oilseeds, as determined by the Secretary. This was to prevent the announced loan rate from acting as a price floor when world prices are low. At the same time, the soybean loan rate was raised to \$5.02 per bushel from \$4.50 in 1990, and price supports for minor oilseeds, added to the loan program, could be no less than \$0.089 per pound.

The increase in the soybean loan rate, and implementing first-time support for the minor oilseeds, does not indicate greater market orientation for the U.S. oilseeds sector. But the OBRA added a 2-percent loan origination fee to oilseed loans, reducing effective support to the sector. The 1992 loan rates for soybeans and minor oilseeds remain unchanged from 1991. Provided the loan rate is sufficiently below market prices, the loan rate is not expected to interfere with price determination in the market. Moreover, the loan program is now a marketing loan, so it should not interfere with the market.

... and Forfeitures Decline

The relationship between market prices and loan rates determines whether a producer with a nonrecourse loan will repay the outstanding debt or forfeit the crop to the government as payment. When market prices are very low, and close to loan rates, repaying the loan plus interest may not be as attractive as simply forfeiting the crop, and avoiding interest charges.

The loan program was also intended to facilitate an orderly marketing of commodities. If farmers are forced to sell their crops at harvest to meet expense obligations, market prices could be unduly depressed and farm income would suffer.

However, as legislated loan rates rose over the years—in some years effectively

setting the market price—the likelihood of loan forfeiture also increased and the government became the residual buyer. Since 1987, following the change in the FSA pegging loan rates to past market prices, 100 percent of the corn and nearly all of the wheat placed under loan has been redeemed.

Stocks Isolated For Shorter Time

The 1990 farm act also modified entry and exit requirements for the Farmer Owned Reserve (FOR), to make the FOR more responsive to market signals. No direct entry is now permitted; producers must first take out an original 9-month loan.

In general, conditions permitting grain to enter the FOR are more restrictive than in the past—grain remains available for marketing longer. The decision rule for grain entering the FOR depends on the relation of market prices to loan rates, and projected stocks-to-use ratios.

If the average wheat market price falls to 80 percent or less of the loan rate for 90 days (prior to December 15 of the harvest year), or if the projected ending stocks-to-use ratio is above 37.5 percent, the Secretary may permit wheat to enter the FOR. If both conditions occur—depressed prices and excessive stocks-to-use—the Secretary must allow wheat to enter the FOR.

For corn, conditions are similar: average prices at or below 80 percent of the loan rate, or a projected stocks-to-use ratio above 27.5 percent over a period of 90 days prior to March 15 of the year after harvest. As with wheat, when both price and stock conditions are met, the Secretary must permit corn to enter the reserve.

The act also reduced the length of the loan. The loan must be repaid within 27 months from the date the original 9-month loan expires, although producers may repay the loan at any time before the end of this period. Thus, the maximum loan period is 36 months, compared with extensions which were commonly

granted prior to the 1990 farm act. The Secretary may extend loans for an additional 6 months under the 1990 act. The changes make grain in the reserve more accessible to the market, and keep grain from being isolated for extended periods.

A Small Step for Market-Oriented Dairy

The dairy program was modified slightly by the 1990 farm act. The minimum announced support level is \$10.10 per cwt for milk containing 3.67 percent milkfat. The support level may be adjusted up or down, depending on government purchases of dairy products (on a milk-equivalent basis), but it may not be set below the minimum. In addition, the OBRA assessed producers \$0.05 per cwt in 1991, and \$0.1125 per cwt will be assessed on their commercial marketings for calendar years 1992-95. If producers do not increase marketings from year-earlier levels, they may apply for a refund of these assessments.

Also beginning in 1992, producers will be assessed the amount needed to reimburse the government for purchases of dairy products that exceed 7 billion pounds in milk equivalent (total solids basis). For 1992, no assessments were needed, since purchases were projected below 7 billion pounds.

The dairy price support is currently at its minimum level—the same as under the last year of the FSA. The inability to reduce price supports for milk does not enhance the market orientation initiated under the 1990 farm act. On the other hand, imposing marketing assessments and shifting to producers the cost of government purchases above 7 billion pounds, should increase producers' consideration of market conditions in their production decisions.

Not all changes introduced with the 1990 farm act could be considered a movement in a market-oriented direction. But for the major U.S. field crops, the act contains incentives for farmers to rely less on government programs. In general, the 1990 farm act and OBRA appear to be setting U.S. agriculture on a more market-oriented course. [Harry S. Baumes (202) 219-0687]

EC CAPs Reforms . . . Again

After almost a year of intense debate, EC agricultural ministers adopted on May 21 a package of reforms to the Common Agricultural Policy (CAP), although the technical details of implementation are still under discussion. The reforms focus on those sectors experiencing the most severe budgetary and surplus production problems—the grains sector in particular. Changes to the costly oilseeds regime that were undertaken following a GATT oilseeds panel decision will remain in place (See AO, November 1991).

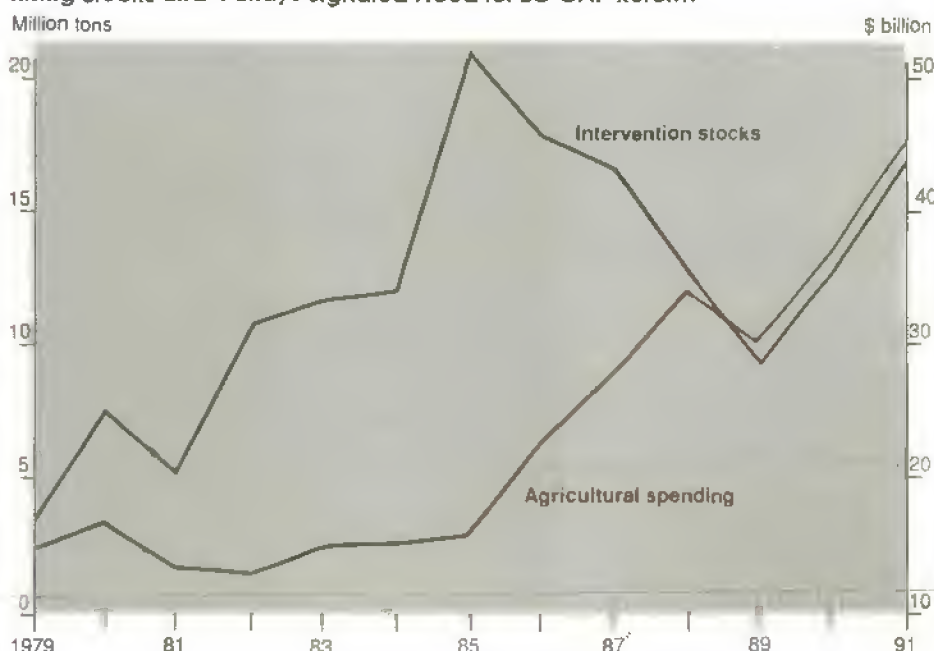
The CAP reforms cover approximately half of the total value of European Community (EC) agricultural production. While the reforms adopted in May are not the first, they represent a fairly radical departure from past mechanisms, and clone many of the features of U.S. agricultural programs, such as deficiency payments and set-asides. Moving away from what has been the foundation of EC farm policy since the CAP began in the

early 1960's—price support to farmers—the reforms substitute direct payments to producers for a portion of the support provided through intervention prices. The reforms will be phased in over 3 years, beginning in 1993/94.

The EC's intervention price—the price at which farmers may sell commodities into Community intervention storage—acts as a support price for producers. In that sense, the intervention price is similar to price support provided by the U.S. loan rate. The CAP calls for intervention prices for cereals to be reduced to 100 ECU per ton (approximately \$146 per ton). This represents a 35-percent cut from the average intervention price of 155 ECU per ton. Intervention prices for beef are reduced 15 percent, and for butter by 5 percent. Stricter production controls will apply for tobacco farmers.

Shortly after the reforms were proposed in 1991, details of the plan were hotly debated by farm organizations, national agriculture ministers and other agriculture interests. Farmers objected to the cuts in prices, and doubts were expressed that the Commission could afford to make

Rising Stocks and Outlays Signaled Need for EC CAP Reform



Source: EC Commission.

Policy

the direct payments it had proposed. The reforms finally adopted reflect a number of the concerns of farmers.

Grains Sector Faces Greatest Changes

The cereals sector provides the best illustration of the Commission's plan to replace price support with direct payments. EC intervention prices for all cereals will be lowered from an average of 155 ECU per ton in 1991/92 to 100 ECU per ton by 1995/1996—the end of a transition period. Farmers will receive compensation for the support price reduction through direct payments.

Payments will be made on the basis of the combined area planted to grains, oilseeds, and protein crops. For grains, compensation rates will be 45 ECU per ton, and for protein crops 65 ECU per ton in the last year of the reforms. Under the current oilseeds regime, the compensatory amount is about 163 ECU per ton. Compensation will be based on regional yields, determined by EC member states under "regionalization plans." Member states can choose between establishing individual base areas for their farmers, or relying on regional base areas.

To be eligible for direct payments, some farmers will be required to set aside part of their area. The set-aside requirement would apply to larger, or "professional" farms, defined as farms capable of producing more than 92 tons of cereals. Based on EC average cereals yields, farms over 20 hectares (approximately 50 acres) would be considered professional farms, covering about 35 percent of all farms and 65 percent of total area.

Farmers may opt for either a rotational or nonrotational set-aside program. Under the rotational set-aside, farmers would be required to idle 15 percent of their land, but would receive compensation payments on each hectare idled. The nonrotational option would require a larger set-aside, and compensation would not be paid on all idled area. In the Commission's original proposal, set-aside compensation was limited for the largest farms. Farmers with more than 50 hectares planted to cereals, oilseeds, or pro-

Background on the CAP Reforms

The EC's Common Agricultural Policy recognized agriculture as a key element of the Community's social structure and its overall economy. Adopted in the early 1960's, its objectives were to:

- increase agricultural productivity through technical progress and optimum utilization of labor;
- ensure a fair standard of living for the agricultural population, by increasing earnings of persons in agriculture;
- stabilize markets;
- guarantee regular supplies; and
- ensure reasonable prices to consumers.

Intervention prices are not the only means of providing support through the CAP. Target prices, threshold prices, import levies, and export restitutions are also key policy variables of the CAP. Outlays for the CAP consume about 55 percent of the EC budget. Agricultural spending under the CAP amounted to nearly \$45 billion in 1991, compared with about \$10 billion for commodity support in the U.S.

In the 1980's, the EC began to apply milk quotas, price stabilizers, coresponsibility (producer) levies, and

other mechanisms in an effort to contain the growth in budgetary expenditures and give the market a larger role in influencing production. A number of reforms were put into place during the decade:

1982—A maximum guaranteed quantity is set for rapeseed output.

1984—Milk production quotas are established; intervention prices are frozen or reduced for most commodities; and a maximum guaranteed quantity is set for sunflowerseed output.

1986—A coresponsibility levy of 3 percent is applied to cereals sold off the farm, and limits on intervention of cereals and beef are enacted.

1987—A maximum guaranteed quantity is set for soybean output, limits imposed on intervention of butter and skim milk powder, and the buying-in price for cereals set at 94 percent of the intervention price.

1988—A maximum guaranteed quantity is set for output of grains and most other commodities; direct income aid for some small producers is introduced; annual growth in the rate of agricultural spending is limited to 74 percent of the increase in the EC's GNP growth rate; and a voluntary land set-aside program is introduced.

tein crops would not have been fully compensated for the area they had to remove from production.

Cereal Price Cuts Will Lower Feed Costs

The reduction of grains intervention prices will cut feed costs for livestock farmers. Part of the 15-percent cut in the beef intervention price is designed to reflect these lower input costs, but the cut is also necessary to keep beef competi-

tive with other meats. Unlike beef producers, EC pork and poultry farmers do not benefit from large-scale intervention buying, but they will benefit more than beef producers from the reduction in grains prices.

Some of the price support for beef and sheep farmers has been shifted to direct payments, based on the number of animals a farmer owns. The Commission established a maximum number of animals per hectare that would be eligible for premiums—roughly two adult bovines or

six sheep per hectare. Payments for young male beef animals are limited to the first 90 head, and payments for sheep are limited to the first 500 ewes, or 1,000 ewes for farms in less favored areas.

Although dairy expenditures comprise the largest share of CAP expenditures, changes in the dairy sector involve only minimal price cuts, and potential future adjustment through supply management. Reforms adopted in the grains and livestock sectors, on the other hand, generally reflect the Commission's original proposals.

The Commission had proposed a 3-percent cut in the net quota for milk, and

cuts in butter and skim milk powder intervention prices of 15 and 10 percent. The main points of the 3-year reform adopted for dairy include:

- a 5-percent cut in the intervention price for butter;
- no reduction in milk quota for 1992/93, although cuts of 1 percent in the following 2 years may be made if needed; and
- simplification and consolidation of the quota regime.

The CAP reform agreement extends the current dairy quota regime for 8 years,

until March 31, 2000. Spain and Greece are to receive quota increases of 500,000 and 100,000 tons in 1992/93.

Dairy quotas since 1984 have helped reduce EC milk output. Following a 2-percent quota cut implemented in 1991/92, EC dairy product markets have been relatively tight. So unlike in many previous years, intervention buying of butter and skim milk powder has not been necessary in many member states. Without the pressure from surplus production, the agriculture ministers did not feel the need to impose reforms on the dairy sector.

[Mary Lisa Madell (202) 219-0611] **AO**

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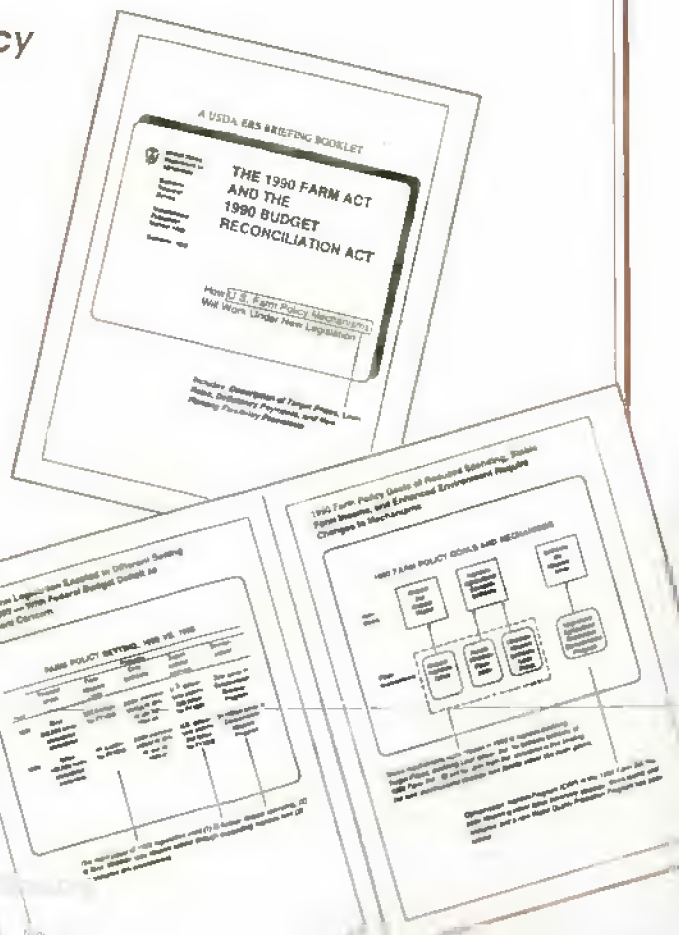
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Special Articles



Sustainable Agriculture: Putting It into Practice

As highlighted at the U.N.'s recent Conference on Environment and Development in Rio de Janeiro, more sustainable development—including farming methods—is moving up on the public agenda. The type of agriculture described as sustainable is not necessarily low input or low technology, but one that integrates several technologies that are more efficient and environmentally responsible.

Although new, sophisticated technologies play a role, many older, familiar practices are also important to sustainable systems. Indeed, many of the technologies and practices described in this article are not new. More than a lack of information about new techniques blocks the path to widespread adoption. This article, the second in a series on sustainable agriculture, looks at some techniques considered sustainable, the barriers to adoption, and the evolving research and policy environment.

Sustainability Means a Comprehensive Approach

There is more to sustainable agriculture than simply reducing the use of synthetic chemical inputs. It involves a more comprehensive approach. Crop choice and rotation plan, tillage plan,

soil fertility programs, and pest control are critical elements in any successful farming system—conventional or sustainable. The various elements are linked, so that a change in one may affect others.

Some tillage techniques, for example, reduce soil erosion but require more herbicides. And some crop rotations can affect pesticide and fertilizer requirements. Likewise, reducing or eliminating synthetic fertilizers requires closer attention to crop choice and soil fertility management. On more sustainable farms, the techniques are selected and combined with more regard to the total effect on the farm and the environment. Also, more management is typically required in sustainable systems.

Crop Rotations Can Be Sustainable

Before the widespread availability and use of synthetic fertilizers and pesticides, crop rotations were almost universally practiced to maintain soil productivity and control weeds, pests, and diseases. In general, higher yields and improved soil quality can be achieved by rotating different crops on a field instead of planting the same crop season after season. The yield increase results from a variety of factors:

- better insect, weed, and disease control;
- increased soil organic matter;
- increased nutrient availability;
- better erosion control with some crops and tillage practices; and
- increased soil moisture.

Yields are further increased when a leguminous crop like alfalfa, clover, vetch, or soybeans is part of the rotation. Grain yields following the planting of legumes are often 10-20 percent higher than with grain alone. Because rotations increase potential yields, farmers can often cut their use of pesticides and fertilizers. This adds up to more biological activity in the soil, less root disease, and less damage from nematodes and other pests. Crop rotations can provide other benefits—reducing revenue risk by diversifying income among several crops, and increasing drought tolerance.

While crop rotation is a common practice, the adoption of more sustainable rotations (see box) has been limited. A 1990 USDA survey of 10 major corn producing states showed that while 25 percent followed a continuous corn sequence, 40 percent of the corn acreage followed a corn-soybeans rotation. Although a corn-soybeans rotation generally requires less synthetic chemicals than continuous corn, many do not consider it a sustainable system.

Winter wheat producers in a four-state survey showed more variety in rotations, including soybeans, corn, barley, sunflowers, and dry beans. However, continuous wheat was used on 13 percent of the fields and a wheat-fallow sequence was used on 18 percent of the fields.

A more sustainable rotation used in the Palouse area of Washington and Idaho is known as PALS—Perpetuating Alternative Legume System. PALS is a 3-year rotation of peas, winter wheat, and unharvested green manure—which fixes nitrogen and may retard root diseases in wheat. The wheat is grown without commercial fertilizers, herbicides, or fungicides.

One study showed variable costs under a PALS rotation were only 44 percent of conventional rotation costs, yet wheat yields were close to those using conventional rotations. Until the planting flexibility provisions of the 1990 farm act, this rotation was less profitable than a conventional rotation, except in years when acreage reduction requirements were high and deficiency payments low. In general, increased planting flexibility in the programs improves the profitability of PALS compared with a conventional rotation.

Breaking Ground With Tillage

Farmers have traditionally tilled fields to improve the soil's physical condition—known as tith—as well as to control weeds and to prepare a good seedbed. Some tillage techniques, like crop rotation, also improve soil quality and boost yields. Tillage techniques can:

- incorporate air;
- improve the water retention of the soil;
- improve plant nutrient absorption; and
- incorporate organic matter which improves soil biology and texture.

Among the variety of tillage practices, each leaves different amounts of plant residue and therefore has a different impact on soil erosion. Use of a moldboard plow is a conventional tillage practice that prepares a seedbed but leaves essentially no plant residue on the soil surface. This promotes erosion and decreases water quality.

Alternative or conserving tillage practices attempt to maintain the yield advantage of conventional tillage while minimizing erosion and water quality degradation. Where water erosion is the primary concern, a tillage method is considered a conserving practice if at least 30 percent of the soil surface is covered by crop residue at planting time.

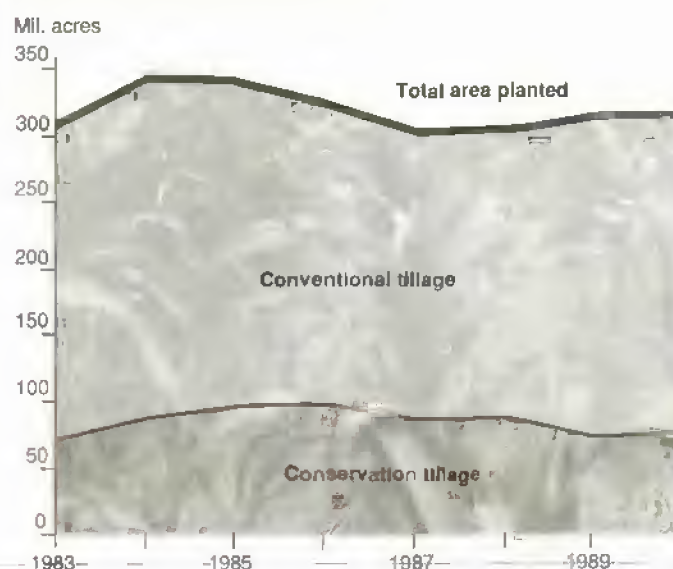
Research on conservation tillage began in the early 1930's in the U.S., but did not gain popularity until the 1960's. Conserving tillage methods include no-till, ridge-till, strip-till, mulch-till, and reduced-till. No-till, as the name implies, does not disturb the soil to prepare a seedbed and is the most conserving method. Conservation tillage methods were used on 73 million acres, or about a fourth of planted area, in 1990.

Tillage methods vary by region and crop. In 1991, Midwest corn producers used conventional tillage with a moldboard plow on 15 percent of acres, conventional systems without moldboard plow on 55 percent, mulch-till on 20 percent, and no-till on 10 percent. The distribution varied considerably by state, from Nebraska corn farmers using no-till on 23 percent of their acres to Wisconsin's corn farmers using no-till on only 1 percent of their acres.

No-till was used on Midwest corn and soybean acres more than any other crops, while spring and winter wheat producers in the Northern Plains used no-till systems on just 3 percent of their land. The choice of an optimal tillage method also depends in part on the vulnerability of the field to erosion and leaching, as well as soil type. Heavy clay soils, for example, are inappropriate for no-till because fields remain wet and cold longer in the spring. This can hold back planting times and lower yields.

Each tillage system also demands different combinations of labor and fuel. A USDA survey of corn producers showed that hours spent preparing the seedbed ranged from 0.8 per acre for conventional tillage with moldboard plow, to 0.3 for mulch tillage. Farmers using no-till spent 0.2 hours per acre on other practices, such as chopping stalks.

Only a Fourth of U.S. Planted Acres
Receive Conservation Tillage

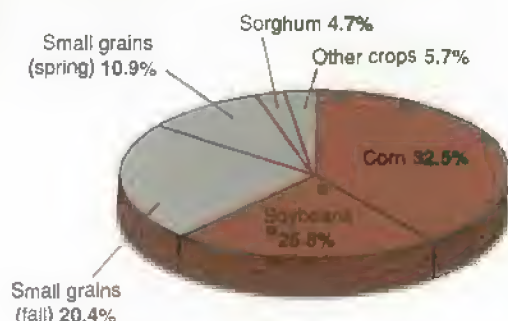


Area planted for principal crops. Conservation tillage includes no-till, ridge-till, strip-till, mulch-till, and reduced till.

Source: Conservation Technology Information Center.

Special Articles

Most Conservation Tillage Is Used for Corn and Soybeans



Total: 73 million acres, 1990

Percent of planted acreage for principal crops under conservation tillage; small grains include wheat, barley, and oats.

Source: Conservation Tillage Information Center.

Lower labor and fuel costs can increase the attractiveness of more sustainable tillage practices. For some producers, savings in cost and time are more important than soil and water conservation in the decision to adopt conservation tillage methods.

Other Techniques: IPM & Intensive Grazing

Pests can lead to significantly higher farm production costs, lower quality, and lower yields. Farm production losses to pests are estimated to exceed 35 percent annually. Moreover, heavy reliance on chemicals leads to pest resistance and destruction of nontarget, beneficial insects. Integrated Pest Management (IPM) is an ecological approach to pest suppression. Introduced in the 1970's, in response to the counterproductive effects of relying exclusively on chemical controls, IPM combines the sparing use of pesticides with biological, cultural, and other nonchemical practices.

Crop rotations and a number of tillage practices can also contribute to the control of pests. The goal of IPM is to keep pest populations below economically damaging levels while minimizing disturbance to other species and organisms. IPM techniques also can minimize the exposure of workers to pesticides, and reduce residue levels on food and feed products.

Crop scouting is often used in an IPM program to determine when pest populations have reached thresholds where they are about to cause economic damage, calling for a pesticide application. Beneficial insects—natural predators—can also be introduced to fields to control pest populations. Indigenous beneficial insects can be nurtured by careful use of groundcover, hedge rows, strip cropping, and other methods.

Early IPM research concentrated on basic investigations of the physical relationships between crops and pests, and later shifted

to applied control techniques. IPM techniques were developed initially for field crops, where the bulk of pesticides are applied. By the 1980's, IPM was extended to several fruits and vegetables, including lettuce, tomatoes, and grapes.

A sustainable technique used in livestock production is intensive grazing. This method mimics the behavior of animals grazing in the wild. In the wild, herbivores herd together to ward off predators. They stay on the move as they eat, in part to avoid their own waste.

With intensive grazing, animals are kept in dense herds, and moved to new fields frequently. According to the *New Farm*, this sustainable approach has helped increase pasture diversity and stability in some areas. Such crop-livestock systems can yield cattle weights and profits similar to conventional operations. While intensive grazing systems generally require more labor and management, they use less machinery, fuel, herbicides, and fertilizer compared, for example, with feeding corn and silage to dairy cattle in confinement.

Why Don't More Farmers Switch?

Today's conventional farming techniques reflect the economic environment in which farmers operate: relatively low chemical input prices, few penalties for pollution, and a history of agricultural programs geared to the production of a few, basic crops. This environment is beginning to change, but sustainable production may still involve economic tradeoffs.

Farmers are uncertain how more sustainable techniques would affect yields and profitability, and in particular, whether the individual benefits of sustainable techniques exceed the costs. This may be based on experience, but may also be due to lack of information. Adoption of new or more comprehensive techniques are also determined by soil type, terrain, weather, expected prices of inputs and outputs, farm programs, equipment, farm size, management skills, and labor availability.

In a 1987 *New Farm* survey of farmers who switched to sustainable techniques, about half the respondents saw no change in yield, about 35 percent experienced a yield decrease, and the rest saw a yield increase. Of those with a yield decrease, 42 percent cited nutrient deficiencies and 72 percent cited weed problems as the principal reasons. Yields seem to increase gradually after switching to more sustainable practices.

While some farmers have been able to increase net returns with a more sustainable approach, others have found it less profitable. Lower returns can occur because of lower valued crops in a rotation. And while some sustainable practices are less expensive than conventional practices—like conservation tillage—others are not. Sustainable techniques are usually not as efficient as herbicides in reducing yield losses from weeds.

Sustainable Success Stories

The Thompson experimental farm in Iowa uses several rotations that are considered more sustainable. Two are particularly applicable to farms with livestock—involving different sequences of corn, soybeans, oats, and meadow (which produces hay). The oats and hay are used as feed, and livestock manure is applied to the fields before planting corn and soybeans. Sewage sludge is also applied to fields as part of the fertility management program.

Another rotation on the farm, which does not require livestock, involves corn, soybeans, oats, and a "green manure" cover crop. Green manure crops include hairy vetch, clovers, alfalfa, rye, and Austrian winter peas. The crops are grown and plowed under while still green to enhance soil quality and fertility. If such crops are sown in the fall, they can serve as a "catch" crop to utilize nutrients that would otherwise leach away or run off the soil.

The benefits of replacing chemical nitrogen with animal manure, legumes, and green manure are typically: less denitrification, leaching and volatilization; slower release of nitrogen from the organic matter, which can increase availability to plants during the growing season; and better soil organic content.

The Iowa farm has above-average yields and below-average production costs. However, the farm is a showcase for sustainable agriculture, and may not be typical of other farms' experiences. And although the farm has had success with alternative rotations, for the most part its rotations are not commonly practiced on other farms. One reason is that more sustainable rotations often require planting crops with low market value, and this can be a significant financial tradeoff for some farmers. A USDA survey in 1990 supports the reluctance to make this tradeoff. While 28 percent of the fields used a crop other than corn or soybeans in rotations, only 8 and 2 percent used the lower valued alfalfa and oats.

In 1985, a team of scientists at South Dakota State University began a crop rotation study representing two locations, Watertown and Madison. In 1988, the study was

funded by the SARE program. Economists on the team used the experimental findings from the study to develop preliminary estimates of net returns that would be earned by a typical family farm of 540 tillable acres. The objective of the study was to compare conventional to more sustainable farming.

During the drought of 1988, the only approach tested in the study was the lower input farming system—using less purchased inputs, but more on-farm inputs such as legumes, in crop rotation.

At the Watertown site, this farming approach earned an estimated \$4,900 profit using a crop rotation of oats, alfalfa, soybeans, and spring wheat. The simulated farms using a conventional rotation of corn, soybeans, and spring wheat, combined with chemical pesticides and conventional tillage, incurred net losses between \$23,000 and \$25,000, a considerable difference compared with the lower input system.

Some farmers have found that the combination of lower chemical inputs and careful management results in slightly lower gross returns but higher net returns. Site-specific information is critical to the decision to use less purchased inputs, however. A study of one group of Illinois farmers found that the farmers with the highest amounts of purchased inputs per acre harvested more bushels, but earned less profit per acre, than farmers using less purchased inputs.

By contrast, in southern Illinois, the category of farms with the higher fertilizer and chemical inputs had the greater net return. The ability to maintain or improve profitability when using less pesticides and fertilizer is a complex issue, depending on the farm's crop history, soil productivity, management ability, weather, and a host of other factors.

Sustainable practices usually require a different level of farming skills and more hours devoted to farming. Frequently, the more sustainable farms include livestock to produce organic fertilizer and to feed on some of the low-value crops in a rotation, but livestock demands a substantial labor commitment. If family members must give up other types of employment to devote more time to agricultural education or farm work, family income may decline.

The divergence of public benefits and private costs is a key barrier to adoption. Sustainable techniques that reduce water pollution for nearby areas provide a public benefit, but little or no private benefit for the farmer who incurs the cost. Environmental subsidies would enable farmers to appropriate some of the benefits and could encourage wider use of more sustainable practices. Large-scale Federal programs have been proposed for farmers who improve water quality. Some pilot programs are already underway.

Special Articles

Nitrogen & Nitrates—A Question of Timing

Nitrogen is a key nutrient for plant growth and frequently a limiting nutrient in crop production. Nitrogen is abundant in the atmosphere but cannot be used directly by plants. It has to be in nitrate form in the soil for plant uptake to occur.

Common organic sources of nitrogen for plant use are: (1) plant residue or manure, (2) nitrogen-fixing legume crops such as alfalfa, and (3) soil organic matter. Inorganic sources of nitrogen are: (1) nitrogen in rain or irrigation water, and (2) commercial nitrogen fertilizer. In its organic form, nitrogen is not available for direct plant use.

Organic nitrogen in the soil must decompose into inorganic forms for plant uptake. Some organic nitrogen converts to nitrogen gases and escapes (denitrification). What remains is converted to ammonia (some of which may also volatilize), then into nitrites, and finally into nitrates. These processes are called ammonification and nitrification. Inorganic sources of nitrogen enter the soil already in the form of ammonia and nitrates.

Crop absorption of applied commercial nitrogen is estimated between 25 and 70 percent. Absorption of nutrients in manure is generally lower. The absorption rate depends on plant growth and health, and method and timing of application. If the water-soluble nitrates are not used by the plant, they are highly prone to leaching. Some nitrogen can also be lost through runoff.

Use of organic or noncommercial fertilizers benefits the soil by improving soil texture and increasing water-holding capacity. They also provide trace elements or micronutrients. Nitrogen-fixing crops in a rotation can also absorb excess nitrates and reduce nitrate leaching early in

their growing season. However, organic sources of nitrogen convert into nitrates slowly during the growing season, and this delivery of nutrients may not be optimal for plant growth.

Commercial nitrogen fertilizers can respond to plant requirements at the appropriate time and place. This reduces uncertainty for farmers. However, commercial nitrogen fertilizers do not improve soil quality and can lower water quality. For example, if a farmer applies a commercial fertilizer and it rains heavily the next day, significant nutrient-laden runoff and leaching can occur.

The challenge for farmers is to manage the system so that the proper amount of nitrogen is available to the plant, in a usable form, at the right time and place for plant growth requirements. Too much nitrogen may lead to environmental contamination and too little may lead to poor plant growth. Overestimating nitrogen needs is costly to the public as well as to the farmer, but underestimating needs is also costly to the farmer.

Computer screening models, by analyzing what happens to fertilizers in the soil, can help determine optimal amounts to apply. The Nitrate Leaching and Economic Analysis Package (NLEAP) was developed by USDA scientists for use under a range of soil, climate, and management conditions. Using information that includes the fertilizer chemistry, soil properties, rainfall, and plant uptake, the NLEAP helps identify high-nitrate concentration areas so that site-specific management techniques can be applied to minimize leaching of nitrates to groundwater. The NLEAP and other computer models are enabling farmers to better manage the use of fertilizers and pesticides.

Taxes are one alternative to raise the costs of environmentally harmful practices and encourage farmers to adopt sustainable agriculture practices. Fertilizers and other agrichemicals are taxed in some states to support sustainable agriculture research, but the tax is usually not sufficient to encourage substantial cuts in synthetic chemical use.

In Iowa, for example, the tax on commercial nitrogen is \$0.75 a ton. There are nitrogen taxes in California, South Dakota, and Wisconsin as well. In Wisconsin, revenue from the tax is used to help finance the repair and replacement of contaminated wells. Other states, such as Nebraska, are beginning to regulate the manner in which farmers use chemicals. However, until there is a more substantial change in the private benefits or costs to farmers, little change will likely be seen in adoption rates.

In past years, government programs tended to favor conventional over sustainable approaches. Crop rotations that included a "nonprogram" crop reduced a farm's base acreage and eligibility for income support—revenue few farmers wish to give up, especially in years of low prices and among those with high acreage bases. A recent government survey of farmers found that 75 percent would diversify into other crops if there was no penalty, but most also felt the best way to reduce economic risk was to participate in Federal programs. However, other surveys suggest that little difference exists between cropping sequences of farm program participants and nonparticipants.

U.S. Policymakers Respond

The 1990 farm legislation contained provisions that influence cropping practices and, in particular, encourage crop rotations.

Under new planting flexibility provisions, producers may plant up to 25 percent of their base acreage to certain other crops without losing acreage base. Acreage eligible for deficiency payments was reduced by 15 percent of the crop acreage base for the 1991-95 crop years. However, this acreage—termed normal flex acreage—remains eligible for nonrecourse and marketing loans. (See the Field Crops Overview, page 3, and "U.S. Moves in Market-Oriented Direction," page 24.)

The 1990 farm act also established the Agricultural Water Quality Incentive Project—a program that pays producers who farm land with water quality problems to adopt more conserving practices. Unlike programs that remove sensitive land from production, this program helps farmers improve techniques to reduce water pollution, using an approved water quality protection plan. The first sign-up was February 1992.

Integrated Farm Management (IFM) is another new program that allows farmers to plant resource-conserving crops without losing base or program payments. Farmers agree to follow an approved 3-5-year program of resource management that includes planting an average of at least 20 percent of their enrolled crop acreage bases to designated resource-conserving crops.

The 1990 legislation calls for 3-5 million acres to be enrolled annually in the IFM through 1995. In 1991, a maximum of 1 million acres was allowed, but only 5.5 percent of eligible acreage was enrolled. Oregon had the highest participation rate, with 53 percent of the state's allocation of 11,821 acres enrolled. Participation is expected to rise in 1992 and later years.

In the U.S., land grant universities as well as USDA are shifting resources to address sustainable agriculture issues. USDA's Agricultural Research Service (ARS) is spending \$94 million annually to investigate biological pest controls, IPM, prediction and control of erosion, more disease- and pest-resistant crop varieties, and pollution-reducing nutrient management programs.

Another \$6.7 million is being spent in fiscal 1992 on sustainable agriculture research through USDA's Cooperative State Research Service (CSRS), which administers the Sustainable Agriculture Research and Education (SARE) program. Since its inception in 1988, through fiscal 1992, the program has spent nearly \$18 million on 164 projects, including 27 projects under the ACE program—"Agriculture in Concert with the Environment." ACE is a joint EPA-USDA effort to reduce agricultural pollution. Over 2,000 farmers have participated in SARE projects, helping decide which projects to fund, participating in research, and communicating the results to other farmers.

Spurred by the national program, a number of states are funding their own farmer-oriented sustainable agriculture programs. Projects range from developing sustainable systems for cranberries, to developing IPM programs to deal with the white-fly problem. A number of sustainable approaches to livestock management have also been funded.

As part of the President's Water Quality Initiative, USDA is conducting extensive field tests to measure and track the fate of pesticides and fertilizers after application. The tests will give a better idea of how agricultural nonpoint-source pollution evolves, and its costs to society.

Surveys of pesticide and fertilizer use and alternative practices are also being expanded for field crops, fruits, and vegetables. And economic research is underway on issues ranging from developing a set of environmental accounts—similar in concept to national income accounts—to estimating the economic effects of shifting to a more sustainable agriculture.

International Efforts Get a Lift

Efforts to combine productivity with sustainability are underway in other countries as well as in the U.S. The Food and Agricultural Organization (FAO) of the United Nations is shifting to more sustainable programs with the Integrated Plant Nutrient System (IPNS), aimed at maintaining and increasing soil fertility for sustainable agricultural production.

In the European Community (EC), the MacSharry proposals call for an agro-environmental action program, emphasizing farmers' role in protecting the rural environment and managing the landscape. The proposals would pay farmers to:

- use less fertilizer and pesticides in crop production, and reduce herds in overstocked areas;
- conserve or reestablish the diversity and quality of the natural environment; and
- care for abandoned rural land, or idle land for up to 20 years.

Several EC members have already adopted programs to address the environmental impact of farming, including Denmark's plan to reduce pesticide applications by 50 percent before 1997, the UK's Nitrate Sensitive Areas scheme, and the Netherlands' Manure Law and Law on Soil Protection.

The global research community includes 17 agricultural organizations under the umbrella of the Consultative Group on International Agricultural Research (CGIAR). The groups conduct activities ranging from improving grain production to improving farming systems in developing countries.

Sustainable farming systems in the U.S. and around the world are likely to become more sophisticated in the future. Genetic engineering, remote sensing, and new soil tests are some of the newer technologies with potential to make conventional farming more environmentally friendly, and sustainable farming more profitable. [Gregory Gajewski and Linda Calvin (202) 219-0888, Ann Vandeman and Utpal Vasavada (202) 219-0432] AO

Special Articles



Pasquale Iocco—Portuguese Trade Commission

World Grain Markets: Competing for a Smaller Pie

Highlights of early USDA projections of the 1992/93 world grain markets include increased production, reduced trade prospects, and modestly higher consumption—giving a small boost to supplies. Prices are expected to soften somewhat, and a slight rebuilding of stocks is anticipated.

But projected stocks compared with use remain relatively low, with two important implications. First, any sudden shocks in supply and demand are likely to magnify price changes. Second, 1993/94 consumption will again largely depend on the season's output to satisfy demand.

A look back at 1991, and at market conditions in some key regions, indicates potential areas of pressure in international markets in the coming year. For all countries, significant adjustments in these projections are possible due to unusual weather or other sources of change. For coarse grains, which have an October-September trade year, the 1991/92 season will run for another few months.

Lower Trade Prospects Dominate Outlook

World supplies of wheat and coarse grains are projected to increase nearly 2 percent in 1992/93, but weak economic growth prospects for some key players will hold down growth in global use and trade. The smaller world market means sharp competition among the U.S. and foreign exporters.

This year's outlook continues to be clouded by structural changes and policy adjustments underway in several countries—most notably the former Soviet Union and Eastern Europe. Largely due to changes in these regions, where grain consumption is expected to be flat, world trade prospects are poor. Global wheat trade is projected to decline 6 million tons, and coarse grains by more than 4 million tons.

Excluding the former centrally planned economies, a different picture emerges. Consumption gains elsewhere are projected to continue, fueled largely by increased use in developing countries. However, the increases will not be sufficient to stimulate trade gains large enough to offset declines anticipated in the former Soviet Union and Eastern Europe.

Although U.S. farm prices for wheat are projected to rise in 1992/93, the outlook for international wheat prices is more uncertain. Export prices have been declining recently from the high levels of early 1992 and are likely to be held in check by increased competitor supplies. A surge in world wheat prices midway through the 1991/92 season has encouraged spring wheat planting in the Northern Hemisphere, and winter wheat in the Southern Hemisphere. Corn prices are expected to decline, because of a projected increase in U.S. production and an anticipated buildup in ending stocks. The price of corn, the dominant coarse grain traded on the world market, is largely determined by conditions in the U.S.

Wheat Trade Shrinks with Less Demand from Former USSR

World wheat production is projected at 548 million tons, up slightly from 1991/92. Although global use is projected down, it is still expected to exceed production, leading to marginally reduced ending stocks.

World wheat trade in 1992/93 is projected at 101 million tons, down 6 percent from 1991/92, mainly because imports by the former Soviet Union are projected to contract by a third from 1991/92. Imports by other countries are projected to expand 1 percent, partially offsetting the decline in imports by the former Soviet Union. Strong competition for the smaller world market will continue.

Events in Eastern Europe & Former USSR Cast a Long Shadow

The former Soviet Union has taken an annual average of 19 percent of global coarse grain and wheat imports between 1986/87 and 1991/92, and Eastern Europe another 2 percent. The economic and political upheavals in these regions are leading to adjustments in the agricultural sectors and in trade patterns, casting a long shadow on global grain trade.

Price liberalization and the breakdown of central market distribution systems are bringing years of consumer and producer subsidies to an end. Falling grain consumption in recent years, particularly feed use and waste, and the lack of foreign exchange, are major reasons for lower imports by these countries and, subsequently, reduced global trade.

Radical shifts in livestock and grain use are already occurring in the former Soviet Union, and especially in Eastern Europe, where privatization and market development are farther along. There, farmers have begun to substitute more profitable crops for grain or are leaving land fallow. Similar changes are likely to follow in the former Soviet republics, though the onset remains uncertain.

Producers in the former Soviet Union have not yet begun substantial changes in their patterns of production. However, they have withheld grain from sales to central procurement agencies because of lack of confidence in government and in rubles.

The livestock and poultry industry in the former Soviet Union is in decline, suffering from feed shortages and higher prices. In 1991/92, there was an unusually large decline in feed supplies, reflecting a continued drop in State grain procurements, insufficient feed grain and protein meal imports, and reduced roughage production. Additional pressure stems from declining meat consumption since consumer subsidies were removed and retail prices rose.

With a rebound in grain production, feed use of grain is only projected to drop 1 percent in 1992/93. Feed use of grain dropped an estimated 16 percent in 1991/92. This probably understates the decline in feed because of the end of bread feeding after subsidies were lifted. When bread was highly subsidized, an unquantified amount was fed to livestock.

With livestock inventories down and a projected 18-percent increase in the coarse grain and wheat harvest in

1992/93, farmers may be more willing to sell grain to state procurement agencies. This combination of factors leads to a projected 34-percent decline from 1991/92 in wheat and coarse grain imports, to 26 million tons.

In Eastern Europe, changes in livestock inventories, as well as relative price changes, have already prompted cutbacks in grain production. Meat consumption fell in many countries when input and consumer subsidies were lifted. Farm prices for livestock products fell at the same time that the costs of production rose because input subsidies were eliminated. Some producers quickly reacted and reduced livestock inventories. However, surpluses remain as the adjustments continue.

Large crops and reduced grain use, particularly for feed, led to substantial grain surpluses in 1991/92, falling prices, and attempts to boost exports. The region's grain exports rose in 1991/92 to an estimated 6.6 million tons and imports fell to 2.2 million tons, as Hungary, Poland, Czechoslovakia, and the former Yugoslavia tried to reduce surpluses by exporting grain. Romania, Bulgaria, and Albania remain net importers, but with a severe lack of foreign exchange, they depend on credit and donations to import grain. Reforms are generally less advanced in these three countries.

Despite Eastern Europe's ability to produce exportable supplies of grain, the region is having trouble finding markets. The key problem is the contraction of imports by the former Soviet Union, the chief destination for East European exports in the past. Locating alternative outlets in highly competitive world markets, where export subsidies and use of credit is widespread, is also a problem given the regions' difficult financial position.

In 1992/93, East European producers are expected to reduce total area planted to grain. In Bulgaria, Hungary, and Romania, land redistribution, low grain prices, and high input prices are contributing to cuts in grain area. In the former Yugoslavia—plagued by civil war—farmers were unable to plant much winter wheat. In addition, dry conditions in the southern half of Eastern Europe are reducing yields. Area declines in Poland and Czechoslovakia, though more gradual, reflect high production costs and low returns. East European grain exports are projected to fall 48 percent this year, to 3.4 million tons. Imports are projected up 1 million tons, to 3.3 million tons, but this would be the second lowest in at least three decades.

Special Articles

Major U.S. competitors' output is projected up 2 percent, with their exports up 3 percent. Early projections for wheat production by major competitors show the largest increases in Australia and Argentina, a record EC crop, and the fourth-largest Canadian crop ever. Total competitor supply could swell by 6 percent.

EC wheat production is projected at 90 million tons, up marginally from the record 1991/92 crop despite dry conditions in Spain and Portugal. The EC's 1-year set-aside program apparently had little impact on fall planting decisions, likely because relative returns at planting favored wheat over barley, and because uncertainty over oilseed policies likely encouraged wheat planting over rapeseed. EC carryin for 1992/93 is projected at a record 21 million tons, increasing exportable supplies substantially above a year ago. EC exports for 1992/93 are currently projected up just 2 percent from 1991/92, to 21.5 million tons. Further increases will require a more aggressive EC export policy.

At 30 million tons, Canada's wheat crop is projected down 9 percent from the 1991/92 record, but still its fourth largest. Canada's Gross Revenue Insurance Plan (GRIP) may encourage slightly larger spring plantings, as farmers substitute wheat for barley and pull fallow land into production. Beginning stocks, at 12.5 million tons, are up 23 percent from a year ago. Despite large supplies, strong competition for the smaller global pie is expected to limit Canada's exports to 23 million tons, down 4 percent from the estimated 1991/92 record.

Australia is projected to boost production to 15.5 million tons, 46 percent over 1991, when drought and low prices at planting cut harvested area to its lowest since 1972/73. Favorable planting conditions in 1992/93, and anticipation of relatively high prices (especially compared with wool), could lead farmers to expand area to the highest since 1986/87. Exports in 1992/93 are projected at 11 million tons, up nearly a third from 1991/92.

Recent policy changes in Argentina are sending mixed signals to wheat producers, but prices are clearly higher now at planting time than for the 1991/92 wheat crop. Early projections call for wheat area to expand nearly 25 percent, to 5.5 million hectares, and for production to reach 10 million tons, up 1 million from 1991/92. In a July-June marketing year, projected exports of 5 million tons would be down 9 percent from 1991/92. On Argentina's marketing year, however (December-November), projected exports of 5.4 million tons would be up 17 percent from the year earlier.

Smaller competitors, including India, Turkey, Saudi Arabia, and East European countries, will export an estimated 12.7 million tons of wheat in 1991/92. Wheat exports by these countries, with the exception of Saudi Arabia, are projected to fall in 1992/93 because of smaller crops or reduced stocks.

U.S. Wheat Export Volume Down

U.S. wheat exports in 1992/93 are projected at 31.5 million tons, down 8 percent from 1991/92. Market share is projected at 31 percent, compared with 32 percent in 1991/92, when gains in the U.S. share were made with large sales to the former Soviet Union and China, and when Australian production and exports were sharply reduced. In 1992/93, tight U.S. domestic supplies, increased foreign competition, and reduced world import prospects will erode the U.S. market share.

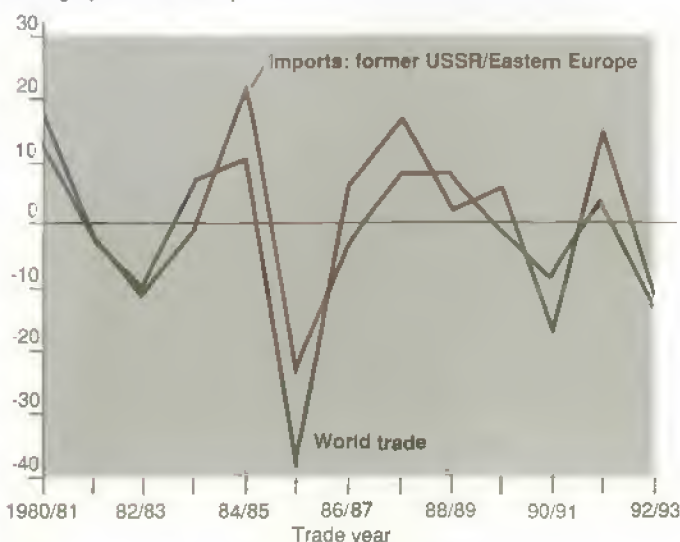
As in past years, the former Soviet Union, China, and North Africa are the most hotly contested markets. However, imports by the former Soviet Union and China are often the greatest source of uncertainty this early in the marketing year.

The first quarter of 1992/93 is starting out slowly. Wheat sales for delivery in 1992/93 are down 11 percent from a year ago and the lowest in at least 10 years, according to USDA's June 4 *U.S. Export Sales Report*. The absence of new crop sales to China accounts for most of the decline.

Importers may be waiting to take advantage of lower, postharvest prices. Prices are likely to fall later in the summer, when the EC crop enters the market, and the acreage and condition are known for spring wheat crops in the Northern Hemisphere and winter wheat crops in the Southern Hemisphere. So importers that can wait may enter the market later than usual.

Grain Imports by Former USSR and Eastern Europe Shape World Grain Trade

Change (mil. metric tons)



Change in annual trade volume. Trade year—July-June for wheat, October-September for coarse grains. 1992/93 projected

World Coarse Grain Trade To Contract

World trade in coarse grains in 1992/93 is projected to decline 5 percent to 86.5 million tons. This would be the lowest trade volume in 5 years. The major factor supporting this outlook is expected lower level of corn and barley imports by the former Soviet Union—by about a third from the 18.1 million tons forecast for 1991/92. Even so, the former Soviet Union would remain the world's second-largest coarse grain importer.

Projected imports by Japan, the largest coarse grain market, are down fractionally from 1991/92, to 21.2 million tons. The lack of growth in Japanese coarse grain imports reflects rising meat imports following market liberalization, reducing Japan's use of feed grains.

For the rest of the world, coarse grain imports are projected to rise 3 percent in 1992/93. Significant gains are projected for South Korea, Mexico, and South Africa. Import growth in the first two markets stems largely from healthy economic growth and increasing feed demand. In addition, South Korea is likely to replace some feed wheat with corn, based on expected relative prices.

For South Africa, higher import needs reflect drought-induced shortfalls of corn, the main food staple. Increased production in South Africa and neighboring drought-stricken countries is expected, but harvests will come too late to reduce the region's import needs for 1992/93.

Competitors' Coarse Grain Exports To Shrink

Among major coarse grain exporters, the 1992/93 outlook calls for an increase in aggregate production, but a decline in exports—mainly because an expected recovery in South Africa's output will not translate into higher exports in the October-September 1992/93 trade year.

By contrast, U.S. competitors' exports in 1991/92 are forecast at the highest since 1985/86, based on a 45-percent gain in exports by Argentina and smaller gains by China, Canada, and the EC.

With normal weather, South Africa's crop could rebound by more than 5 million tons, but recovery will not be enough to shift the country from net importer to net exporter. Compared with 1991/92 shipments of 800,000 tons of corn, exports will be slashed to a bare 100,000 tons in 1992/93.

Declining coarse grain exports are also projected for Canada, stemming from reduced supplies of barley, Canada's principal coarse grain export. Lower carryin stocks and a smaller crop will lead to a 1-million-ton reduction in barley shipments. In

Drop in Imports by Former USSR Pulls Down World Grain Trade

	1990/91	1991/92 P	1992/93 F
Million metric tons			
Wheat trade			
Major exporters:			
Argentina	4.7	5.5	5.0
Australia	11.8	8.4	11.0
Canada	20.5	24.0	23.0
EC	20.7	21.0	21.5
Subtotal	57.7	58.9	60.5
U.S.	28.3	34.2	31.5
Major importers:			
Former USSR	15.7	21.0	14.0
China	9.5	15.5	15.0
North Africa	14.2	12.9	14.5
East Europe	1.6	1.2	2.0
Japan	5.6	5.8	5.7
S. Korea	4.2	4.7	3.6
Others	43.4	45.8	46.2
Total	94.2	106.9	101.0
Coarse grain trade			
Major exporters:			
Argentina	5.3	7.7	7.6
Australia	3.2	2.8	2.8
Canada	5.3	6.2	4.4
China	7.0	8.3	8.3
EC	7.9	8.3	9.0
South Africa	0.8	0.8	0.1
Thailand	1.4	0.8	0.8
Subtotal	30.9	34.9	33.0
U.S.	51.8	48.5	48.2
Major importers:			
Former USSR	16.7	18.1	12.0
Japan	21.5	21.3	21.2
Mexico	4.9	5.2	6.5
S. Korea	5.6	6.2	8.1
Saudi Arabia	5.3	5.8	5.8
Taiwan	5.5	6.0	5.7
Others	28.5	28.5	27.2
Total	88.0	91.1	86.5

July-June for wheat; October-September for coarse grains
P=Preliminary, F=Forecast.

addition, corn exports are projected to decline to 400,000 tons from a forecast record 1 million in 1991/92.

But a rebound in oats output will enable Canada to maintain oats exports at 1991/92 levels. Canadian producers are planting more oats in light of relatively attractive prices and favorable prospects for sales to the U.S. due to expected declines in supplies of oats from Scandinavian countries.

Exports by Argentina are projected to show little change. Coarse grain output is likely to be down about 1 million tons, due to lower yields after an exceptional 1991/92. However, harvest for the 1991/92 season has just recently been completed, and decisions about planting 1992/93 crops later this year will be strongly influenced by relative prices of coarse grains and competing oilseeds.

Special Articles

Thailand's exports are projected to fall slightly in 1992/93, as corn supplies remain relatively tight. Over the last several years, Thailand's corn exports have trended downward in the face of soaring domestic feed demand. In 1991/92, Thailand is importing a small amount of corn to cover domestic needs.

China is projected to maintain corn exports at the record 8 million tons of 1991/92, given large carryin stocks and expectations of another big crop. Exports have been increasing because of successive bumper crops, and huge surpluses developing in the main corn growing regions in the northeast. Limited transportation infrastructure has constrained movement to deficit regions in the south, while provincial authorities favor exports to generate valuable foreign exchange.

Little change is projected for Australia's coarse grain production and exports in 1992/93. In contrast to wheat area which fell dramatically in 1991/92, barley area increased and is projected to be about steady in 1992/93. Barley makes up most of Australia's exports. Unlike most barley which is traded for feed in world markets, a considerable portion of Australia's barley is expected to be sold for malting use in Asia.

EC production is projected down about 2 million tons, due largely to lower area in Spain following dry conditions. However, the EC is projected to increase exports by 8 percent because of record carryin stocks. Stocks are projected to increase even further in 1992/93, although a change in stocks policy and more aggressive use of export subsidies could push EC exports higher and reduce carryover.

Little Change in U.S. Coarse Grain Exports

U.S. coarse grain exports in 1992/93 are projected at 48.2 million tons, just below the 1991/92 forecast of 48.5 million. This volume would be the lowest since 1986/87.

U.S. corn exports are projected at 40 million tons in 1992/93, while foreign corn shipments could fall about 2 million tons because of reduced exports by Eastern Europe and South Africa. China is expected to remain the leading foreign corn exporter, providing sharp competition to the U.S. in South Korea and other Asian markets. The rise in China's exports in the last few years has more than offset declines in exports by Thailand.

Although Argentina's corn exports are projected to trail China's again in 1992/93, it will compete with the U.S. for sales in a wider range of markets than China. China and Argentina do not generally provide export credits, but both price corn below the U.S.

U.S. exports of sorghum are projected at 6.2 million tons, down about 5 percent from 1991/92, with Mexico expected to continue as the largest destination, followed by Japan. Mexico is buying sorghum at a record pace in 1991/92, due to short domestic sorghum supplies, growing feed demand, and continued restrictions on corn feeding. Small additional import gains by Mexico are projected in 1992/93. Foreign sorghum exports are projected to drop slightly because of lower shipments by Argentina, the main competitor. Nearly all Argentine exports go to Japan.

U.S. exports of barley are projected to match the 1991/92 volume of 2 million tons, the highest since 1987/88. Most U.S. exports will again be made under the Export Enhancement Program, to the Middle East and north Africa, where competition with the EC is paramount. The EC is expected to continue as the world's dominant barley exporter, followed by Canada, Australia, and the U.S. [Pete Riley and Sara Schwartz (202) 219-0824] **AO**

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Statistical Indicators

Summary Data

Table 1.—Key Statistical Indicators of the Food & Fiber Sector

	1991				1992				
	II	III	IV	Annual	I	II F	III F	IV F	Annual F
Prices received by farmers (1977=100)	151	147	139	146	141	141	—	—	—
Livestock & products	165	159	155	162	154	157	—	—	—
Crops	136	135	123	130	127	125	—	—	—
Prices paid by farmers, (1977=100)									
Production items	175	173	172	173	171	173	—	—	—
Commodities & services, interest, taxes, & wages	188	189	189	189	189	191	—	—	—
Cash receipts (\$ bil.) 1/	163	173	167	167	163	—	—	—	—
Livestock (\$ bil.)	84	84	89	86	84	—	—	—	—
Crops (\$ bil.)	80	86	85	82	79	—	—	—	—
Market basket (1982-84=100)									
Retail cost	139	137	137	137	138	—	—	—	—
Farm value	110	104	101	106	102	—	—	—	—
Spread	154	155	155	154	158	—	—	—	—
Farm value/retail cost (%)	28	27	26	27	26	—	—	—	—
Retail prices (1982-84=100)									
Food	137	136	137	137	138	138	—	—	—
At home	137	135	136	136	137	137	—	—	—
Away from home	137	139	141	138	140	141	—	—	—
Agricultural exports (\$ bil.) 2/	8.8	8.4	11.3	37.5	11.3	9.5	8.9	—	41.0
Agricultural imports (\$ bil.) 2/	5.5	5.3	5.8	22.6	6.1	5.7	5.4	—	23.0
Commercial production									
Red meat (mil. lb.)	9,636	9,986	10,316	39,402	10,086	9,932	10,450	10,440	40,908
Poultry (mil. lb.)	8,296	8,415	8,338	24,885	8,300	6,580	6,605	6,585	26,070
Eggs (mil. doz.)	1,420	1,441	1,475	5,758	1,458	1,460	1,470	1,480	5,868
Milk (bil. lb.)	38.6	36.3	36.2	148.5	37.9	38.8	36.7	36.8	150.3
Consumption, per capita *									
Red meat and poultry (lb.)	50.1	51.0	52.9	201.7	50.4	51.8	52.8	53.8	208.6
Corn beginning stocks (mil. bu.) 3/	6,940.3	4,789.0	2,992.0	1,344.5	1,521.2	6,541.1	4,558.9	—	1,120.7
Corn use (mil. bu.) 3/	2,151.6	1,797.8	1,472.2	7,760.7	2,461.1	1,986.6	—	—	7,895.0
Prices 4/									
Choice steers—Neb. Direct (\$/cwt)**	77.92	69.15	69.96	74.28	75.77	75-76	69-75	71-77	72-76
Barrows & gilts—7 mths. (\$/cwt)	53.34	50.85	39.84	48.88	38.68	43-44	39-45	36-42	39-43
Broilers—12-city (cts./lb.)	52.2	54.2	50.5	52.0	50.2	53-54	50-56	44-50	49-53
Eggs—NY gr. A large (cts./doz.)	70.2	77.1	76.8	77.5	63.8	59-60	62-68	68-74	63-67
Milk—all at plant (\$/cwt)	11.37	12.30	13.70	12.22	12.97	12.50-13.10	12.70-13.70	13.20-14.20	12.90-13.50
Wheat—KC HRW ordinary (\$/bu.)	3.00	3.11	3.82	3.18	4.50	—	—	—	—
Corn—Chicago (\$/bu.)	2.48	2.47	2.49	2.47	2.66	—	—	—	—
Soybeans—Chicago (\$/bu.)	5.73	5.65	5.68	5.69	5.75	—	—	—	—
Cotton—Avg. spot 41-34 (cts./lb.)	81.0	66.7	55.8	69.7	51.4	—	—	—	—
	1984	1985	1986	1987	1988	1989	1990	1991	1992 F
Gross cash income (\$ bil.)	156.1	157.9	152.8	165.1	171.9	179.9	188.0	183	179-186
Gross cash expenses (\$ bil.)	118.7	110.7	105.0	109.8	114.5	120.5	124.2	125	125-130
Net cash income (\$ bil.)	37.4	47.1	47.8	55.3	57.4	59.4	61.8	58	51-58
Net farm income (\$ bil.)	28.1	28.8	31.0	39.7	40.6	50.1	50.8	42	37-45
Farm real estate values 5/									
Nominal (\$ per acre)	801	713	640	599	632	661	668	681	685
Real (1982 \$)	769	657	568	518	530	533	517	506	491

1/ Quarterly data seasonally adjusted at annual rates. 2/ Annual data based on Oct.-Sept. fiscal years ending with year indicated. 3/ Sept.-Nov. first quarter; Dec.-Feb. second quarter; Mar.-May third quarter; Jun.-Aug. fourth quarter; Sept.-Aug. annual. Use includes exports & domestic disappearance. 4/ Simple averages, Jan.-Dec. 5/ 1990-92 values as of January 1. 1986-89 values as of February 1. 1984-85 values as of April 1. F = forecast, — = not available.

* The pork carcass to retail conversion factor has been revised. ** Omaha Choice steer price has been replaced by the Nebraska Direct, 1,100-1,300 lb. Choice steer price.

U.S. & Foreign Economic Data

Table 2.—U.S. Gross Domestic Product & Related Data

	Annual			1991				1992
	1989	1990	1991	I	II	III	IV	I R
\$ billion (quarterly data seasonally adjusted at annual rates)								
Gross domestic product	5,244.0	5,513.8	5,672.6	5,589.0	5,652.8	5,709.2	5,739.7	5,817.5
Gross national product	5,248.2	5,624.5	5,685.8	5,611.7	5,660.6	5,720.1	5,750.7	5,836.6
Personal consumption expenditures	3,517.9	3,742.6	3,889.1	3,827.7	3,868.5	3,916.4	3,943.7	4,022.6
Durable goods	459.8	465.9	445.2	440.7	440.0	452.9	447.3	468.2
Nondurable goods	1,146.9	1,217.7	1,251.9	1,246.3	1,252.9	1,257.4	1,251.1	1,273.3
Clothing & shoes	200.5	208.7	211.0	208.2	212.8	214.6	208.4	217.8
Food & beverages	563.3	595.8	619.3	616.3	620.6	620.4	620.0	630.2
Services	1,911.2	2,059.0	2,191.9	2,140.7	2,175.6	2,206.1	2,245.2	2,281.0
Gross private domestic investment	837.6	802.6	726.7	709.3	708.8	740.9	747.9	726.0
Fixed investment	801.6	802.7	745.2	746.4	745.8	744.5	742.0	749.4
Change in business inventories	36.0	0.0	-18.5	-39.2	-37.1	-3.6	6.0	-23.3
Net exports of goods & services	-82.9	-74.4	-30.7	-38.8	-17.2	-37.3	-31.4	-27.5
Government purchases of goods & services	971.4	1,042.9	1,087.5	1,068.8	1,092.5	1,089.1	1,079.5	1,096.5
1987 \$ billion (quarterly data seasonally adjusted at annual rates)								
Gross domestic product	4,836.9	4,884.9	4,848.8	4,824.0	4,840.7	4,862.7	4,868.0	4,896.9
Gross national product	4,840.7	4,894.6	4,860.2	4,843.7	4,847.8	4,872.0	4,877.3	4,912.9
Personal consumption expenditures	3,223.1	3,262.6	3,259.0	3,241.1	3,252.4	3,271.2	3,271.1	3,314.2
Durable goods	440.8	438.9	412.5	410.8	408.9	418.3	412.2	430.0
Nondurable goods	1,049.3	1,050.8	1,043.0	1,043.9	1,046.2	1,046.1	1,035.8	1,049.6
Clothing & shoes	187.9	187.4	182.9	181.7	186.1	184.7	179.0	185.4
Food & beverages	513.3	515.8	517.2	518.7	517.0	517.4	515.6	521.1
Services	1,732.9	1,773.0	1,803.4	1,786.3	1,797.2	1,806.8	1,823.1	1,834.6
Gross private domestic investment	789.2	744.5	673.7	657.0	656.3	686.5	694.9	674.7
Fixed investment	758.6	744.2	687.6	689.8	686.9	686.5	687.2	693.1
Change in business inventories	32.6	0.2	-13.9	-32.8	-30.4	0.1	7.6	-18.4
Net exports of goods & services	-75.7	-51.3	-20.9	-18.6	-12.3	-31.1	-21.3	-22.3
Government purchases of goods & services	900.4	929.1	937.1	944.5	944.3	936.1	923.3	930.4
GDP implicit price deflator (% change)	4.3	4.2	3.6	5.0	3.1	2.1	1.7	3.1
Disposable personal income (\$ bil.)	3,788.6	4,058.8	4,218.4	4,151.0	4,207.5	4,238.2	4,276.8	4,345.1
Disposable per. income (1987 \$ bil.)	3,471.2	3,538.3	3,534.9	3,514.6	3,537.4	3,539.9	3,547.5	3,579.9
Per capita disposable per. income (\$)	15,313	16,236	16,695	16,492	16,678	16,752	16,855	17,081
Per capita dis. per. income (1987 \$)	14,030	14,154	13,990	13,965	14,022	13,992	13,981	14,073
U.S. population, total, incl. military abroad (mil.) *	247.3	249.9	252.7	251.6	252.2	252.9	253.7	254.3
Civilian population (mil.) *	245.1	247.8	250.6	249.4	250.1	250.8	251.6	252.3
	Annual			1991				1992
	1989	1990	1991	Apr	Jan	Feb	Mar	Apr
Monthly data seasonally adjusted								
Industrial production (1987=100)	108.1	109.2	107.1	105.5	106.6	107.2	107.6	108.2
Leading economic indicators (1982=100)	144.9	144.0	143.5	141.9	146.6	147.7	148.3	148.9
Civilian employment (mil. persons)	117.3	117.9	116.9	117.4	117.1	117.0	117.3	117.7
Civilian unemployment rate (%)	5.2	6.4	6.6	6.5	7.0	7.2	7.2	7.1
Personal income (\$ bil. annual rate)	4,380.2	4,679.8	4,834.4	4,792.0	4,915.9	4,965.3	4,987.5	4,990.3
Money stock—M2 (daily avg.) (\$ bil.) 1/	3,227.3	3,339.0	3,438.9	3,394.8	3,447.6	3,474.7	3,472.9	3,466.8
Three-month Treasury bill rate (%)	8.12	7.51	5.42	5.67	3.84	3.84	4.05	3.81
AAA corporate bond yield (Moody's) (%)	9.26	9.32	8.77	8.86	8.20	8.29	8.35	8.33
Housing starts (1,000) 2/	1,376	1,193	1,014	978	1,180	1,257	1,344	1,115
Auto sales at retail, total (mil.)	9.9	9.5	8.4	8.0	8.0	8.5	8.3	8.2
Business inventory/sales ratio	1.51	1.51	1.52	1.54	1.51	1.49	1.49	—
Sales of all retail stores (\$ bil.)	145.1	150.6	151.8	151.4	155.7	158.1	156.6	158.0
Nondurable goods stores (\$ bil.)	90.8	96.0	98.0	97.8	99.5	100.9	99.8	100.1
Food stores (\$ bil.)	28.8	30.2	30.9	30.7	31.2	31.0	31.0	31.2
Eating & drinking places (\$ bil.)	14.5	15.2	15.6	15.6	16.3	16.5	16.4	16.2
Apparel & accessory stores (\$ bil.)	7.6	7.9	8.0	8.1	8.1	8.3	8.2	8.3

1/ Annual data as of December of the year listed. 2/ Private, including farm. R = revised. P = preliminary. — = not available.

* population estimates based on 1990 census.

Information contact: Ann Duncan (202) 219-0313.

Table 3.—Foreign Economic Growth, Inflation, & Exports

	1983	1984	1985	1986	1987	1988	1989	1990	1991 E	1992 F	1993 F	Average 1981-90
Annual percent change												
World, less U.S.												
Real GDP	2.4	3.4	3.0	3.1	3.1	3.9	3.2	1.2	-0.8	1.0	3.1	2.6
GDP deflator	7.6	7.1	7.4	7.2	8.7	11.2	11.4	42.1	25.0	54.2	41.9	12.0
Real exports	2.2	8.6	2.5	3.4	5.9	7.6	7.0	4.5	-0.9	2.1	4.6	4.7
Developed less U.S.												
Real GDP	2.1	3.4	3.4	2.6	3.3	4.4	3.6	2.9	1.3	1.7	3.1	2.8
GDP deflator	6.2	4.9	3.9	3.9	2.7	3.1	3.8	3.6	4.3	4.4	2.4	4.8
Real exports	2.7	10.6	5.4	-0.1	4.1	7.3	9.7	7.6	3.9	2.2	4.9	5.7
Eastern Europe & C.I.S.												
Real GDP	2.7	2.0	0.7	3.5	1.2	1.7	1.0	-6.6	-14.4	-8.4	-2.0	0.9
GDP deflator 1/	3.1	3.0	4.2	5.7	8.2	22.5	25.8	190.1	73.1	127.7	71.5	27.6
Real exports	2.8	3.7	-6.8	11.6	6.3	7.4	-5.9	-10.1	-31.7	-3.6	0.4	1.0
Developing												
Real GDP	3.0	4.5	4.0	4.1	4.0	4.4	3.5	2.6	2.7	4.7	6.5	3.4
GDP deflator	38.7	37.3	36.4	25.5	33.1	26.5	19.5	17.7	11.7	12.9	12.5	29.1
Real exports	0.4	7.0	1.7	7.4	10.9	9.2	8.8	5.2	3.4	4.6	6.0	4.8
Asia												
Real GDP	8.4	7.5	6.4	7.0	7.8	9.0	5.3	5.2	5.8	6.3	6.6	6.8
GDP deflator	6.3	7.5	5.9	4.4	7.8	8.2	6.1	8.3	8.5	8.4	7.4	6.7
Real exports	6.4	11.3	2.9	18.9	15.8	14.9	8.2	6.6	7.0	8.0	8.8	9.1
Latin America												
Real GDP	-2.7	3.7	3.6	4.4	3.0	0.0	1.3	-0.5	2.6	3.2	4.0	1.1
GDP deflator 1/	30.0	41.2	68.8	58.5	124.6	31.8	37.0	32.1	16.5	18.0	17.5	46.4
Real exports	2.0	12.0	2.0	0.0	8.0	6.8	10.4	3.8	-1.5	2.1	5.2	5.2
Africa												
Real GDP	0.7	2.1	2.4	1.8	0.3	2.4	3.1	2.8	0.5	2.3	3.1	1.9
GDP deflator	16.4	12.1	12.2	8.0	25.1	17.1	19.4	15.2	17.8	13.2	10.8	14.3
Real exports	-5.3	-1.5	3.5	-1.0	0.0	2.9	5.0	8.5	2.9	1.6	2.8	-1.9
Middle East												
Real GDP	3.6	1.5	0.9	-1.2	-0.7	1.6	2.5	-0.6	-5.5	4.7	6.4	0.7
GDP deflator	-3.6	1.7	3.2	6.5	15.0	10.3	12.8	19.3	-2.4	10.3	14.3	8.1
Real exports	-19.6	-6.7	-7.1	-3.8	24.6	4.8	21.0	4.3	1.7	9.3	33.7	0.0

1/ Excludes Yugoslavia, Argentina, Brazil, & Peru starting in 1989. E = estimate. F = forecast.

Information contact: Alberto Jerardo, (202) 219-0717.

Farm Prices

Table 4.—Indexes of Prices Received & Paid by Farmers, U.S. Average

	Annual			1991		1992				
	1989	1990	1991 P	May	Dec	Jan	Feb	Mar	Apr R	May P
1977 = 100										
Prices received										
All farm products	148	149	148	151	137	138	142	143	141	141
All crops	134	127	130	137	120	123	128	131	126	123
Food grains	156	123	115	112	142	148	154	152	148	144
Feed grains & hay	128	123	118	122	117	119	123	123	124	122
Feed grains	123	118	115	117	116	119	123	123	123	122
Cotton	98	107	108	118	92	85	82	82	86	84
Tobacco	149	152	159	153	161	157	157	176	145	145
Oil-bearing crops	102	93	90	94	83	84	85	84	84	87
Fruit, all	194	188	270	237	209	207	210	204	211	203
Fresh market 1/	205	197	295	255	219	217	221	214	223	213
Commercial vegetables	145	142	135	195	112	137	166	195	148	128
Fresh market	144	144	140	226	105	139	179	222	151	123
Potatoes & dry beans	186	189	144	222	103	101	99	108	134	120
Livestock & products	160	170	162	165	154	152	158	155	155	158
Meat animals	174	193	180	196	180	167	177	177	178	180
Dairy products	140	141	128	117	142	139	133	129	129	132
Poultry & eggs	137	131	125	119	127	115	111	111	111	113
Prices paid										
Commodities & services,										
Interest, taxes, & wage rates	178	184	189	189	169	189	—	—	191	—
Production items	165	171	173	175	172	171	—	—	173	—
Feed	136	128	123	—	—	124	—	—	125	—
Feeder livestock	194	213	214	—	—	199	—	—	199	—
Seed	165	165	163	—	—	163	—	—	162	—
Fertilizer	137	131	134	—	—	132	—	—	132	—
Agricultural chemicals	139	139	151	—	—	154	—	—	160	—
Fuels & energy	180	204	203	—	—	192	—	—	194	—
Farm & motor supplies	160	164	157	—	—	160	—	—	160	—
Autos & trucks	223	231	244	—	—	248	—	—	261	—
Tractors & self-propelled machinery	193	202	211	—	—	216	—	—	217	—
Other machinery	208	216	226	—	—	230	—	—	234	—
Building & fencing	141	144	148	—	—	147	—	—	151	—
Farm services & cash rent	161	166	170	—	—	171	—	—	171	—
Int. payable per acre on farm real estate debt	176	173	172	—	—	166	—	—	166	—
Taxes payable per acre on farm real estate	151	156	160	—	—	165	—	—	165	—
Wage rates (seasonally adjusted)	185	191	201	—	—	218	—	—	218	—
Production items, interest, taxes, & wage rates	167	172	175	—	—	174	—	—	176	—
Ratio, prices received to prices paid (%) 2/	83	81	77	80	72	73	76	76	74	74
Prices received (1910-14=100)	674	681	667	691	628	630	649	653	644	644
Prices paid, etc. (parity index) (1910-14=100)	1,221	1,285	1,299	—	—	1,303	—	—	1,315	—
Parity ratio (1910-14=100) (%) 2/	56	54	51	—	48	48	—	—	49	—

1/ Fresh market for noncitrus; fresh market & processing for citrus. 2/ Ratio of index of prices received for all farm products to index of prices paid for commodities & services, interest, taxes, & wage rates. Ratio uses the most recent prices paid index. Prices paid data are quarterly & will be published in January, April, July, & October. R = revised. P = preliminary. — = not available.

Information contact: Ann Duncan (202) 219-0313.

Table 5.—Prices Received by Farmers, U.S. Average

	Annual 1/			1991		1992				
	1989	1990	1991 P	May	Dec	Jan	Feb	Mar	Apr R	May P
CROPS										
All wheat (\$/bu.)	3.72	2.81	3.05	2.65	3.44	3.55	3.78	3.72	3.65	3.58
Rice, rough (\$/cwt)	7.35	6.70	7.70	7.45	7.92	7.77	7.91	7.72	7.39	7.07
Corn (\$/bu.)	2.36	2.28	2.40	2.38	2.33	2.40	2.47	2.49	2.48	2.48
Sorghum (\$/cwt)	3.75	3.79	4.15	4.11	3.99	4.07	4.20	4.30	4.29	4.20
All hay, baled (\$/ton)	85.40	80.80	71.00	83.70	68.40	69.00	70.80	70.10	73.00	74.20
Soybeans (\$/bu.)	5.69	5.74	5.60	5.67	5.45	5.54	5.59	5.67	5.68	6.89
Cotton, upland (cts./lb.)	66.2	68.2	58.3	70.1	55.6	51.6	49.6	49.9	52.0	51.0
Potatoes (\$/cwt)	7.36	6.08	5.05	7.98	4.14	4.05	3.92	4.33	5.56	4.97
Lettuce (\$/cwt) 2/	12.60	11.50	12.10	23.10	9.12	7.14	6.82	12.10	9.75	11.80
Tomatoes fresh (\$/cwt) 2/	33.10	27.30	32.60	58.10	15.90	40.50	76.00	80.70	32.40	17.30
Onions (\$/cwt)	11.40	10.50	11.80	21.50	10.50	10.70	12.90	21.10	23.30	14.60
Dry edible beans (\$/cwt)	28.50	18.50	15.80	20.00	15.00	15.00	14.90	15.60	16.40	15.30
Apples for fresh use (cts./lb.)	13.9	20.9	—	22.5	25.7	24.9	24.9	24.2	24.3	25.0
Pears for fresh use (\$/ton)	338.00	360.00	392.00	494.00	401.00	383.00	347.00	364.00	379.00	437.00
Oranges, all uses (\$/box) 3/	7.08	6.18	7.31	8.57	5.95	5.93	6.90	6.04	6.59	6.73
Grapefruit, all uses (\$/box) 3/	4.41	5.86	5.26	4.18	8.31	5.92	5.68	7.11	7.65	3.98
LIVESTOCK										
Beef cattle (\$/cwt)	89.70	74.80	72.90	75.90	67.40	68.90	72.50	72.90	72.80	72.20
Calves (\$/cwt)	91.80	96.50	100.00	107.00	87.60	88.30	92.80	94.10	92.00	91.20
Hogs (\$/cwt)	43.20	54.00	48.80	54.10	38.80	36.40	39.60	38.90	40.70	45.20
Lambs (\$/cwt)	67.30	56.00	52.60	57.60	52.00	53.50	55.20	63.40	69.30	69.70
All milk, sold to plants (\$/cwt)	13.56	13.74	12.24	11.30	13.80	13.50	12.90	12.50	12.50	12.80
Milk, manuf. grade (\$/cwt)	12.38	12.34	11.05	10.20	12.30	11.80	11.30	11.10	11.50	11.80
Broilers (cts./lb.)	36.1	32.4	31.0	31.1	29.0	30.0	29.9	29.7	29.4	31.7
Eggs (cts./doz.) 4/	70.0	70.4	66.9	59.3	71.8	58.2	54.3	54.2	54.5	51.7
Turkeys (cts./lb.)	40.0	38.4	38.5	38.3	40.9	37.4	35.3	37.0	38.8	37.6
Wool (cts./lb.) 5/	124.0	80.00	54.0	61.0	40.4	30.6	47.9	62.7	75.4	90.3

1/ Season average price by crop year for crops. Calendar year average of monthly prices for livestock. 2/ Excludes Hawaii. 3/ Equivalent on-tree returns.
 4/ Average of all eggs sold by producers including hatchling eggs & eggs sold at retail. 5/ Average local market price, excluding incentive payments.
 P = preliminary. R = revised. — not available.

Information contact: Ann Duncan (202) 219-0313.

Producer & Consumer Prices

Table 6.—Consumer Price Index for All Urban Consumers, U.S. Average (Not Seasonally Adjusted)

	Annual	1991				1992				
	1991	May	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May
	1982-84=100									
Consumer Price Index, all items	136.2	135.6	137.4	137.8	137.9	138.1	138.6	139.3	139.5	139.7
Consumer Price Index, less food	138.1	135.4	137.7	138.0	138.1	138.3	138.8	139.5	139.7	140.1
All food	136.3	136.6	135.8	136.2	136.7	137.2	137.5	138.1	138.1	137.4
Food away from home	137.9	137.5	139.1	139.3	139.6	139.7	139.9	140.1	140.2	140.4
Food at home	135.8	136.9	134.4	135.0	135.6	136.4	136.6	137.5	137.4	136.2
Meats 1/	132.5	133.4	131.3	131.5	130.8	130.0	130.3	131.1	130.2	130.3
Beef & veal	132.4	134.1	130.7	131.9	131.7	131.2	131.8	133.4	133.2	132.6
Pork	134.1	134.2	132.7	131.3	128.5	127.8	127.2	127.0	125.1	126.8
Poultry	131.6	132.7	131.0	129.3	130.2	131.2	128.1	128.2	129.2	129.1
Fish	148.3	147.0	149.4	149.5	150.4	154.6	151.0	152.6	153.5	151.6
Eggs	121.2	121.4	116.8	115.4	123.6	113.9	110.7	106.0	105.1	104.2
Dairy products 2/	125.1	124.4	125.7	126.2	127.4	128.2	128.1	127.8	127.4	127.0
Fats & oils 3/	131.7	132.6	131.7	129.8	129.3	130.7	131.3	129.8	129.6	130.4
Fresh fruit	193.9	204.8	185.4	183.9	186.6	188.6	183.1	188.7	187.4	190.0
Processed fruit	131.8	132.1	130.5	131.4	131.5	136.0	138.5	138.8	140.0	140.0
Fresh vegetables	154.4	167.3	134.0	149.6	150.7	152.7	163.5	172.7	175.4	149.6
Potatoes	144.6	149.1	132.1	129.9	129.0	130.9	131.7	132.1	135.6	136.7
Processed vegetables	128.5	128.7	128.7	127.7	127.6	129.2	129.0	128.6	128.6	128.8
Cereals & bakery products	145.8	145.3	148.9	147.5	147.4	148.9	149.3	149.7	150.6	150.7
Sugar & sweets	129.3	129.2	130.5	130.6	130.9	132.0	132.4	132.9	133.0	132.9
Beverages, nonalcoholic	114.1	114.9	113.9	113.0	112.5	114.9	116.0	115.3	114.4	114.5
Apparel										
Apparel, commodities less footwear	127.4	126.3	132.0	132.2	128.2	129.0	126.7	132.3	132.0	131.8
Footwear	120.9	121.7	123.4	123.4	121.8	121.3	122.4	124.6	125.6	126.0
Tobacco & smoking products	202.7	199.6	206.1	209.0	211.7	212.6	213.4	213.5	214.9	220.0
Beverages, alcoholic	142.8	142.7	144.5	144.0	143.9	144.8	145.7	146.7	147.2	147.4

1/ Beef, veal, lamb, pork, & processed meat. 2/ Includes butter. 3/ Excludes butter.

Information contact: Ann Duncan (202) 219-0313.

Table 7.—Producer Price Indexes, U.S. Average (Not Seasonally Adjusted)

	Annual			1991			1992			
	1989	1990	1991 P	Apr	Nov	Dec R	Jan	Feb	Mar	Apr
				1982 = 100						
All commodities	112.2	116.3	116.5	116.0	116.4	115.9	115.6	116.1	116.1	116.3
Finished goods 1/	113.6	119.2	121.7	121.1	122.3	121.9	121.7	121.9	122.0	122.2
All foods 2/	117.8	123.2	122.2	123.5	121.1	120.2	120.4	121.3	121.2	120.6
Consumer foods	118.7	124.4	124.1	125.3	123.0	122.3	122.5	123.5	123.4	122.9
Fresh fruit & melons	113.2	118.1	129.4	131.9	112.3	100.8	100.0	88.7	85.7	84.6
Fresh & dried vegetables	116.7	118.1	103.8	119.7	106.5	80.1	108.3	135.1	132.4	104.1
Dried fruit	103.0	106.7	111.5	111.4	111.9	114.9	113.7	115.1	115.1	114.4
Canned fruit & juice	122.7	127.0	128.6	126.8	131.1	133.5	134.7	136.8	136.8	135.9
Frozen fruit & juice	123.9	139.0	115.1	112.8	129.7	131.6	133.9	134.6	134.4	134.4
Fresh veg. excl. potatoes	103.9	107.8	100.2	112.8	113.1	76.1	117.5	154.7	147.9	99.7
Canned veg. & juices	118.6	116.7	112.8	113.8	109.5	110.4	109.7	108.8	109.2	108.6
Frozen vegetables	115.5	118.4	117.6	117.9	116.8	116.8	115.8	116.1	115.8	116.6
Potatoes	153.6	157.3	125.7	158.4	93.2	96.4	94.7	92.8	95.8	112.5
Eggs	119.6	117.6	110.7	113.2	102.1	120.3	91.9	94.1	92.8	92.6
Bakery products	135.4	141.0	146.6	145.6	148.4	149.0	149.1	150.1	150.8	151.6
Meats	104.8	117.0	113.3	117.4	106.5	105.5	103.7	105.8	106.5	107.1
Beef & veal	108.9	116.0	112.1	118.4	106.6	106.9	108.9	110.2	111.2	111.9
Pork	97.7	119.8	113.0	115.7	101.0	98.2	92.8	95.1	95.2	95.6
Processed poultry	120.4	113.6	109.9	109.0	107.3	105.3	105.5	104.8	108.9	107.4
Fish	142.9	147.2	151.3	155.6	158.4	149.9	160.2	167.2	168.5	176.5
Dairy products	110.6	117.2	114.6	111.5	119.8	120.0	118.5	116.1	114.9	115.4
Processed fruits & vegetables	119.9	124.7	119.5	119.2	120.4	121.6	121.9	122.2	122.2	121.9
Shortening & cooking oil	116.6	123.2	116.4	120.8	113.0	114.3	112.0	113.2	115.3	113.6
Soft drinks	177.7	122.3	125.6	127.2	124.2	124.4	124.7	125.9	125.7	124.9
Consumer finished goods less foods	108.9	115.3	118.7	117.2	119.7	119.2	118.7	118.6	118.9	119.4
Beverages, alcoholic	115.2	117.2	123.7	124.3	123.4	123.3	125.7	125.9	125.9	126.4
Apparel	114.5	117.5	119.6	119.4	120.3	120.6	120.8	121.3	121.4	121.7
Footwear	120.8	125.6	128.6	128.3	129.3	129.6	129.8	129.8	132.0	131.5
Tobacco products	194.6	221.4	249.3	243.3	259.8	267.2	268.4	268.4	268.4	268.4
Intermediate materials 3/	112.0	114.5	114.4	113.9	114.0	113.7	113.2	113.6	113.6	113.8
Materials for food manufacturing	112.7	117.9	115.3	116.1	114.2	114.4	114.2	114.2	113.5	113.6
Flour	114.6	103.6	97.6	95.5	99.8	105.0	116.5	122.7	113.4	112.5
Refined sugar 4/	118.2	122.7	121.6	122.0	120.6	120.4	120.8	121.5	121.2	120.6
Crude vegetable oils	103.7	115.8	103.2	111.3	94.9	95.9	94.7	96.1	103.2	98.2
Crude materials 5/	103.1	108.9	101.2	100.8	99.7	97.7	97.3	99.0	98.6	98.9
Foodstuffs & feedstuffs	111.2	113.1	105.5	109.0	101.5	101.6	104.0	106.4	107.5	105.6
Fruits & vegetables & nuts 6/	114.6	117.5	114.5	124.4	108.5	88.7	99.9	108.3	104.1	92.2
Grains	106.4	97.4	92.0	94.1	96.4	97.7	103.1	106.2	108.5	102.7
Livestock	106.1	115.6	107.9	115.8	96.6	97.7	100.0	106.0	107.0	106.7
Poultry, live	128.8	118.8	111.2	107.3	106.8	105.1	106.9	102.8	105.4	102.8
Fibers, plant & animal	107.8	117.8	115.1	134.0	90.3	89.7	85.4	83.4	84.4	89.0
Fluid milk	98.8	100.8	89.3	82.9	99.3	99.6	98.4	95.2	92.0	90.5
Oilseeds	123.8	112.1	106.4	109.7	102.9	103.0	104.3	105.2	110.4	107.9
Tobacco, leaf	93.8	95.8	100.4	99.6	106.1	104.8	102.2	102.2	113.9	94.4
Sugar, raw cane	115.5	119.2	113.7	113.1	114.4	113.5	112.5	112.4	112.6	112.3

1/ Commodities ready for sale to ultimate consumer. 2/ Includes all raw, intermediate, & processed foods (excludes soft drinks, alcoholic beverages, & manufactured animal feeds). 3/ Commodities requiring further processing to become finished goods. 4/ All types & sizes of refined sugar. 5/ Products entering market for the first time that have not been manufactured at that point. 6/ Fresh & dried. P = preliminary. R = revised.

Information contact: Ann Duncan (202) 219-0313.

Farm-Retail Price Spreads

Table 8.—Farm-Retail Price Spreads

	Annual			1991			1992			
	1989	1990	1991	Apr	Nov	Dec	Jan	Feb	Mar	Apr
Market basket 1/										
Retail cost (1982-84=100)	124.8	133.5	137.4	138.5	136.6	137.2	137.9	138.0	138.9	139.0
Farm value (1982-84=100)	107.1	113.1	108.1	109.1	101.1	101.8	100.2	101.7	104.0	103.0
Farm-retail spread (1982-84=100)	134.1	144.5	154.2	154.3	155.7	158.4	158.0	157.4	157.6	158.2
Farm value-retail cost (%)	30.1	29.7	27.0	27.8	25.9	25.9	25.5	25.8	28.2	26.0
Meat products										
Retail cost (1982-84=100)	116.7	128.5	132.5	132.7	131.5	130.8	130.0	130.3	131.1	130.2
Farm value (1982-84=100)	103.6	116.9	110.0	117.2	98.1	97.8	97.0	101.3	104.7	105.7
Farm-retail spread (1982-84=100)	130.2	140.4	155.6	148.6	165.8	164.7	163.9	160.0	158.1	155.3
Farm value-retail cost (%)	44.9	48.0	42.0	44.7	37.8	37.9	37.8	39.4	40.5	41.1
Dairy products										
Retail cost (1982-84=100)	115.6	126.5	125.1	124.5	126.2	127.4	128.2	128.1	127.8	127.4
Farm value (1982-84=100)	99.1	101.7	90.0	85.0	98.2	101.9	98.6	95.4	93.0	89.9
Farm-retail spread (1982-84=100)	130.8	149.5	157.5	160.9	152.0	150.9	155.5	158.2	159.9	162.0
Farm value-retail cost (%)	41.1	38.5	34.5	32.8	37.3	38.4	36.9	35.7	34.9	33.8
Poultry										
Retail cost (1982-84=100)	132.7	132.6	131.5	131.1	129.3	130.2	131.2	128.1	128.2	129.2
Farm value (1982-84=100)	117.1	107.6	102.5	100.1	99.6	98.4	99.4	98.1	98.4	97.5
Farm-retail spread (1982-84=100)	150.6	161.1	164.9	166.7	163.5	166.8	167.8	162.6	162.5	165.7
Farm value-retail cost (%)	47.2	43.5	41.7	40.9	41.2	40.4	40.5	41.0	41.1	40.4
Eggs										
Retail cost (1982-84=100)	118.5	124.1	121.2	124.8	115.4	123.5	113.9	110.7	108.0	105.1
Farm value (1982-84=100)	107.5	108.0	100.9	96.6	94.5	109.8	83.5	74.4	72.9	73.7
Farm-retail spread (1982-84=100)	138.1	153.2	157.8	175.5	152.9	148.1	168.5	175.8	185.5	161.5
Farm value-retail cost (%)	58.3	55.9	53.5	49.7	52.6	57.1	47.1	43.2	44.2	45.1
Cereal & bakery products										
Retail cost (1982-84=100)	132.4	140.0	145.8	145.2	147.5	147.4	148.9	149.3	149.7	150.6
Farm value (1982-84=100)	101.7	90.5	85.3	84.6	91.8	95.8	97.4	103.9	99.7	99.2
Farm-retail spread (1982-84=100)	136.7	146.9	154.3	153.7	155.3	154.6	156.1	155.6	156.7	157.8
Farm value-retail cost (%)	9.4	7.9	7.2	7.1	7.6	8.0	8.0	8.5	8.2	8.1
Fresh fruits										
Retail cost (1982-84=100)	154.7	174.6	200.1	208.5	190.8	196.9	196.7	186.6	191.5	192.0
Farm value (1982-84=100)	108.5	128.3	174.4	177.4	150.8	144.1	132.8	125.2	117.2	118.4
Farm-retail spread (1982-84=100)	176.0	195.9	211.9	219.9	209.3	221.3	226.2	214.9	225.8	226.0
Farm value-retail cost (%)	22.2	23.2	27.5	27.1	25.0	23.1	21.3	21.2	19.3	19.5
Fresh vegetables										
Retail cost (1982-84=100)	143.1	151.1	154.4	169.2	149.6	150.7	152.7	163.5	172.7	175.4
Farm value (1982-84=100)	123.3	124.4	110.8	135.1	104.2	82.5	103.8	123.0	155.8	149.2
Farm-retail spread (1982-84=100)	153.2	164.9	176.8	186.7	173.0	185.7	177.8	184.3	181.4	188.9
Farm value-retail cost (%)	29.3	28.0	24.4	27.1	23.6	19.6	23.1	25.5	30.6	28.9
Processed fruits & vegetables										
Retail cost (1982-84=100)	125.0	132.7	130.2	130.5	129.7	129.7	132.9	134.3	134.2	135.0
Farm value (1982-84=100)	132.4	144.0	120.6	121.5	116.3	128.7	126.8	128.6	126.8	126.7
Farm-retail spread (1982-84=100)	122.7	129.1	133.2	133.3	133.9	130.0	134.8	136.7	136.5	137.6
Farm value-retail cost (%)	25.2	25.9	22.0	22.1	21.3	23.6	22.7	22.4	22.5	22.3
Fats & oils										
Retail cost (1982-84=100)	121.2	126.3	131.7	133.0	129.8	129.3	130.7	131.3	129.8	129.6
Farm value (1982-84=100)	95.6	107.1	98.0	106.2	90.4	91.0	90.7	89.2	96.7	91.5
Farm-retail spread (1982-84=100)	130.6	133.4	144.2	142.2	144.3	143.4	145.4	146.8	142.0	143.6
Farm value-retail cost (%)	21.2	22.8	20.0	21.6	18.7	18.9	18.7	18.3	20.0	19.0
	Annual			1991		1992				
	1989	1990	1991	May	Dec	Jan	Feb	Mar	Apr	May
Beef, Choice										
Retail price 2/ (cts./lb.)	265.7	281.0	288.3	296.1	279.4	278.7	282.5	285.6	287.6	285.8
Wholesale value 3/ (cts.)	176.8	189.6	192.5	190.9	171.8	176.6	184.6	183.3	182.6	183.4
Net farm value 4/ (cts.)	157.6	168.4	160.2	170.0	149.2	155.2	165.7	168.5	168.3	164.1
Farm-retail spread (cts.)	108.1	112.6	128.1	126.1	130.2	123.5	116.8	117.1	119.3	121.7
Wholesale-retail 5/ (cts.)	88.9	91.4	105.8	105.2	107.6	102.1	97.9	102.3	105.0	102.4
Farm-wholesale 6/ (cts.)	19.2	21.2	22.3	20.9	22.6	21.4	18.9	14.8	14.3	19.3
Farm value-retail price (%)	59	60	56	57	53	56	59	59	59	57
Pork										
Retail price 2/ (cts./lb.)	182.9	212.6	211.9	213.3	200.9	198.7	199.8	198.2	194.2	196.4
Wholesale value 3/ (cts.)	99.2	118.3	108.9	115.5	98.3	93.6	99.3	95.6	95.2	101.2
Net farm value 4/ (cts.)	70.4	87.2	78.4	87.4	62.1	59.2	64.9	62.4	66.4	73.3
Farm-retail spread (cts.)	112.5	125.4	133.5	125.9	138.8	139.5	134.9	135.8	127.8	123.1
Wholesale-retail 5/ (cts.)	83.7	94.3	103.0	97.8	102.6	105.1	100.5	102.8	99.0	95.2
Farm-wholesale 6/ (cts.)	28.8	31.1	30.5	28.1	36.2	34.4	34.4	33.2	29.8	27.9
Farm value-retail price (%)	38	41	37	41	31	30	32	31	34	37

1/ Retail costs are based on CPI-U of retail prices for domestically produced farm foods, published monthly by BLS. The farm value is the payment for the quantity of farm equivalent to the retail unit, less allowance for byproduct. Farm values are based on prices at first point of sale & may include marketing charges such as grading & packing for some commodities. The farm-retail spread, the difference between the retail price & the farm value, represents charges for assembling, processing, transporting, distributing. 2/ Weighted average price of retail cuts from pork & choice yield grade 3 beef. Prices from BLS. 3/ Value of wholesale (boxed beef) & wholesale cuts (pork) equivalent to 1 lb. of retail cuts adjusted for transportation costs & byproduct values. 4/ Market value to producer for live animal equivalent to 1 lb. of retail cuts, minus value of byproducts. 5/ Charges for retailing & other marketing services such as wholesaling, and in-city transportation. 6/ Charges for livestock marketing, processing, & transportation.

Information contacts: Denis Dunham (202) 219-0870, Larry Duwaver (202) 219-0712.

Table 9.—Price Indexes of Food Marketing Costs

(See the June 1992 issue.)

Information contact: Denis Dunham (202) 219-0870.

Livestock & Products

Table 10.—U.S. Meat Supply & Use

	Beg. stocks	Produc- tion 1/	Imports	Total supply	Exports	Ending stocks	Consumption		Primary market price 3/
							Total	Per capita 2/	
				Million pounds 4/			Pounds		
Beef									
1989	422	23,087	2,179	25,688	1,023	335	24,330	69.3	73.86
1990	335	22,743	2,356	25,434	1,006	397	24,031	67.8	78.56
1991	397	22,917	2,406	25,720	1,188	419	24,113	67.3	74.28
1992 F	419	23,237	2,370	26,026	1,340	325	24,361	67.5	72-76
Pork									
1989	437	15,813	896	17,146	262	313	16,571	52.0	44.03
1990	313	15,354	898	16,565	239	296	16,030	49.8	54.45
1991	298	15,999	775	17,070	283	393	16,394	50.4	48.88
1992 F	393	17,196	710	18,299	335	390	17,674	53.6	39-43
Veal 5/									
1989	5	355	0	360	0	4	356	1.2	91.84
1990	4	327	0	331	0	6	325	1.1	96.51
1991	6	306	0	312	0	7	305	1.0	99.95
1992 F	7	302	0	309	0	5	304	1.0	89-93
Lamb & mutton									
1989	6	347	63	416	2	8	406	1.5	67.32
1990	8	363	59	430	3	8	419	1.5	55.54
1991	8	363	60	431	3	6	422	1.5	53.21
1992 F	6	356	66	428	3	9	416	1.5	57-61
Total red meat									
1989	870	39,602	3,137	43,810	1,287	660	41,663	124.0	—
1990	660	38,787	3,313	42,760	1,248	707	40,805	120.1	—
1991	707	39,585	3,241	43,533	1,474	825	41,234	120.2	—
1992 F	825	41,091	3,146	45,062	1,678	729	42,655	123.6	—
Broilers									
1989	36	17,227	0	17,263	814	38	18,411	58.7	59.0
1990	38	18,430	0	18,468	1,143	28	17,299	60.1	54.8
1991	28	19,591	0	19,617	1,261	36	18,320	61.8	62.0
1992 F	36	20,609	0	20,645	1,245	35	19,365	64.9	49-53
Mature chicken									
1989	157	531	0	688	24	189	475	1.9	—
1990	189	523	0	713	25	224	464	1.9	—
1991	224	508	0	732	28	274	429	1.7	—
1992 F	274	531	0	805	30	250	525	2.1	—
Turkeys									
1989	250	4,136	0	4,385	41	236	4,109	16.6	66.7
1990	236	4,514	0	4,750	54	306	4,390	17.6	63.2
1991	306	4,603	0	4,909	103	264	4,541	18.0	61.3
1992 F	264	4,739	0	5,003	125	265	4,612	18.1	59-63
Total poultry									
1989	442	21,894	0	22,336	878	463	20,994	77.2	—
1990	463	23,468	0	23,931	1,222	557	22,152	79.5	—
1991	557	24,701	0	25,258	1,392	575	23,291	81.5	—
1992 F	575	25,878	0	26,452	1,400	550	24,502	85.0	—
Red meat & poultry									
1989	1,312	61,496	3,137	65,845	2,165	1,123	62,657	201.2	—
1990	1,123	62,255	3,313	66,691	2,489	1,264	62,958	199.6	—
1991	1,264	64,286	3,241	68,791	2,867	1,400	64,525	201.7	—
1992 F	1,400	66,969	3,146	71,514	3,078	1,279	67,157	208.6	—

1/ Total including farm production for red meats & federally inspected plus nonfederally inspected for poultry. 2/ Retail weight basis. (The beef carcass-to-retail conversion factor was 70.5). 3/ Dollars per cwt for red meat; cents per pound for poultry. Beef: Medium # 1, Nebraska Direct 1,100-1,300 lb.; pork: barrows & gilts, 6 markets; veal: farm price of calves; lamb & mutton: Choice slaughter lambs, San Angelo; broilers: wholesale 12-city average; turkeys: wholesale NY 8-16 lb. young hens. 4/ Carcass weight for red meats & certified ready-to-cook for poultry. 5/ Beginning 1989 veal trade no longer reported separately. F = forecast. — = not available.

Information contacts: Polly Cochran, or Maxine Davis (202) 219-0787.

Table 11.—U.S. Egg Supply & Use

	Beg. stocks	Pro- duc- tion	Im- ports	Total supply	Ex- ports	Hatch- ing use	Ending stocks	Consumption		Wholesale price*
								Total	Per capita	
									No.	Cts./doz.
Million dozen										
1987	10.4	5,888.2	5.8	5,884.2	111.2	599.1	14.4	5,159.5	254.8	81.6
1988	14.4	5,784.2	5.3	5,803.9	141.8	605.9	15.2	5,041.0	248.9	82.1
1989	15.2	5,598.2	25.2	5,638.5	91.8	643.9	10.7	4,892.4	237.3	81.9
1990	10.7	5,685.3	9.1	5,685.0	100.5	678.5	11.8	4,894.4	235.0	82.2
1991	11.8	5,757.8	2.3	5,771.7	154.3	708.1	13.0	4,896.4	232.7	77.5
1992 F	13.0	5,868.3	2.6	5,883.8	157.5	741.2	12.0	4,973.1	234.8	63-67

* Cartoned grade A large eggs, New York. F = forecast.

Information contact: Maxine Davis (202) 219-0767

Table 12.—U.S. Milk Supply & Use^{1/}

Production	Farm use	Commercial		Imports	Total commercial supply	CCC net removals	Commercial		All milk price 1/	CCC net removals		
		Farm marketings	Beg. stock				Ending stocks	Disappearance		Skim solids basis	Total solids basis 2/	
Billion pounds (milkfat basis)								\$/cwt	Billion pounds			
1985	143.0	2.5	140.6	4.8	2.8	148.2	13.3	4.5	130.4	12.76	17.2	15.8
1986	143.1	2.4	140.7	4.5	2.7	147.9	10.8	4.1	133.0	12.51	14.3	12.9
1987	142.7	2.3	140.5	4.1	2.5	147.1	8.8	4.8	135.7	12.54	9.3	8.3
1988	145.2	2.2	142.9	4.6	2.4	149.9	9.1	4.3	136.5	12.26	5.5	6.9
1989	144.2	2.1	142.2	4.3	2.5	149.0	9.4	4.1	135.5	13.56	0.4	4.0
1990	148.3	2.0	146.3	4.1	2.7	153.1	9.0	5.1	139.0	13.73	1.8	4.8
1991	148.5	2.0	146.5	5.1	2.6	154.3	10.5	4.5	139.3	12.23	4.0	6.6
1992	150.3	2.0	148.3	4.5	2.8	155.4	8.4	4.5	142.5	13.20	1.2	4.1

^{1/} Delivered to plants & dealers; does not reflect deductions. ^{2/} Arbitrarily weighted average of milkfat basis (40 percent) & skim solids basis (60 percent). F = forecast.

Information contact: Jim Miller (202) 219-0770.

Table 13.—Poultry & Eggs

	Annual			1991 ^{1/}			1992			
	1989	1990	1991	Apr	Nov	Dec	Jan	Feb	Mar	Apr
Broilers										
Federally inspected slaughter, certified (mil. lb.)	17,334.2	18,553.9	19,727.7	1,701.7	1,513.4	1,815.9	1,775.5	1,580.2	1,760.6	1,723.0
Wholesale price, 12-city (cts./lb.)	59.0	54.8	52.0	62.0	50.3	49.5	50.1	50.3	50.2	49.5
Price of grower feed (\$/ton)	237	218	207	209	211	207	207	206	205	210
Broiler-feed price ratio 1/	3.0	3.0	3.0	2.9	2.8	2.8	2.9	2.9	2.9	2.8
Stocks beginning of period (mil. lb.)	35.9	38.3	26.1	35.4	39.5	38.8	36.1	39.3	36.4	31.8
Broiler-type chicks hatched (mil.) 2/	5,946.9	6,324.4	6,613.3	657.5	511.7	571.5	575.2	531.3	585.9	572.4
Turkeys										
Federally inspected slaughter, certified (mil. lb.)	4,174.8	4,560.9	4,651.9	375.8	419.2	349.9	362.9	331.7	361.3	384.8
Wholesale price, Eastern U.S., 8-16 lb. young hens (cts./lb.)	66.7	63.2	61.2	60.3	63.1	65.2	54.7	55.0	58.8	60.0
Price of turkey grower feed (\$/ton)	251.0	238	230	237	224	224	241	235	239	237
Turkey-feed price ratio 1/	3.2	3.2	3.3	3.1	3.3	3.4	3.1	3.0	3.1	3.1
Stocks beginning of period (mil. lb.)	249.7	235.9	308.4	370.0	653.0	305.5	264.1	325.5	354.1	393.3
Poult placed in U.S. (mil.)	290.7	304.9	308.0	28.9	22.2	24.4	25.7	25.6	27.8	28.2
Eggs										
Farm production (mil.)	67,178	67,983	69,095	5,641	5,789	6,011	5,927	5,540	6,032	5,823
Average number of layers (mil.)	269	270	274	272	277	279	278	278	278	277
Rate of lay (eggs per layer on farms)	249.5	251.7	252.4	20.8	20.9	21.5	21.2	19.9	21.7	21.0
Cartoned price, New York, grade A large (cts./doz.) 3/	81.9	82.2	77.5	74.9	75.8	80.0	65.8	61.7	63.1	65.0
Price of laying feed (\$/ton)	209	200	192	195	196	199	201	201	201	198
Egg-feed price ratio 1/	6.7	7.0	6.9	6.7	6.4	7.2	5.8	5.4	6.4	5.5
Stocks, first of month										
Shell (mil. doz.)	0.27	0.38	0.45	0.42	0.48	0.36	0.63	0.60	0.75	0.84
Frozen (mil. doz.)	14.9	10.3	11.2	10.7	12.7	11.5	12.3	15.2	14.6	15.0
Replacement chicks hatched (mil.)	383	398	417	39.7	30.4	32.7	32.6	31.9	30.3	35.8

^{1/} Pounds of feed equal in value to 1 dozen eggs or 1 lb. of broiler or turkey liveweight. ^{2/} Placement of broiler chicks is currently reported for 15 States only; henceforth, hatch of broiler-type chicks will be used as a substitute. ^{3/} Price of cartoned eggs to volume buyers for delivery to retailers.

Information contact: Maxine Davis (202) 219-0767.

Table 14.—Dairy

	Annual			1991			1992			
	1989	1990	1991	Apr	Nov	Dec	Jan	Feb	Mar	Apr
Milk prices, Minnesota-Wisconsin, 3.5% fat (\$/cwt) 1/	12.37	12.21	11.05	10.04	12.48	12.10	11.71	11.21	10.98	11.46
Wholesale prices										
Butter, grade A Chl. (cts./lb.)	127.9	102.1	99.3	97.2	104.8	98.4	94.9	86.2	86.2	86.2
Am. cheese, Wis. assembly pt. (cts./lb.)	138.8	136.7	124.4	111.7	135.8	130.2	125.3	119.0	119.8	131.9
Nonfat dry milk (cts./lb.) 2/	105.5	100.6	94.0	85.4	110.7	108.6	95.3	97.6	101.8	105.9
USDA net removals 3/										
Total milk equiv. (mil. lb.) 4/	9,357.0	8,951.2	10,425.6	1,685.4	558.9	748.2	2,152.2	1,399.1	1,277.6	1,031.8
Butter (mil. lb.)	413.4	400.3	442.7	70.4	25.2	33.8	96.3	63.6	58.0	46.8
Am. cheese (mil. lb.)	37.4	21.5	76.9	15.1	0.4	0.7	5.2	1.3	0.6	0.6
Nonfat dry milk (mil. lb.)	0	117.8	269.1	48.4	11.0	14.4	9.3	13.7	8.1	7.7
Milk										
Milk prod. 21 States (mil. lb.)	122,509	125,772	125,683	10,918	9,928	10,418	10,684	10,230	11,092	10,899
Milk per cow (lb.)	14,369	14,778	14,977	1,297	1,192	1,252	1,288	1,237	1,343	1,320
Number of milk cows (1,000)	8,526	8,512	8,392	8,416	8,329	8,322	8,296	8,273	8,262	8,258
U.S. milk production (mil. lb.)	144,239	148,314	148,525	7/ 12,888	7/ 11,783	7/ 12,347	7/ 12,667	7/ 12,127	7/ 13,150	7/ 12,868
Stock, beginning										
Total (mil. lb.)	8,379	9,038	13,359	18,813	18,602	15,888	15,841	16,731	18,392	—
Commercial (mil. lb.)	4,258	4,120	5,148	5,793	4,840	4,257	4,461	4,936	5,063	4,828
Government (mil. lb.)	4,122	4,918	8,213	10,005	11,963	11,629	11,379	11,795	13,329	—
Imports, total (mil. lb.)	2,499	2,690	2,519	174	248	287	180	142	178	—
Commercial disappearance (mil. lb.)	135,433	138,988	139,387	10,913	11,676	11,510	10,028	10,584	12,015	—
Butter										
Production (mil. lb.)	1,295.4	1,302.2	1,338.3	134.8	100.8	129.4	158.0	132.0	129.9	119.7
Stocks, beginning (mil. lb.)	214.7	256.2	416.1	555.5	567.1	543.0	539.4	568.8	630.3	655.7
Commercial disappearance (mil. lb.)	876.0	915.2	903.1	55.8	83.7	89.8	51.4	67.4	78.7	—
American cheese										
Production (mil. lb.)	2,674.1	2,894.2	2,804.9	244.7	218.3	247.7	245.5	231.3	248.4	244.9
Stocks, beginning (mil. lb.)	293.0	236.2	347.4	387.4	338.7	320.3	318.7	340.4	350.3	—
Commercial disappearance (mil. lb.)	2,683.1	2,784.4	2,792.7	220.9	235.9	247.7	217.0	220.9	260.6	—
Other cheese										
Production (mil. lb.)	2,941.3	3,167.0	3,285.9	270.8	284.0	286.0	268.5	265.8	296.3	289.8
Stocks, beginning (mil. lb.)	104.7	93.2	110.6	106.2	91.5	89.8	97.5	100.0	97.9	113.5
Commercial disappearance (mil. lb.)	3,208.9	3,426.4	3,574.0	289.7	313.7	310.1	279.1	282.6	298.1	—
Nonfat dry milk										
Production (mil. lb.)	874.7	879.2	877.5	94.8	53.3	88.0	80.2	78.1	82.8	82.2
Stocks, beginning (mil. lb.)	53.1	49.5	181.9	255.8	277.7	225.9	214.6	190.0	153.1	—
Commercial disappearance (mil. lb.)	873.0	697.8	663.1	50.8	45.1	47.6	71.3	60.7	76.9	—
Frozen dessert										
Production (mil. gal.) 6/	1,214.0	1,174.6	1,196.1	104.1	77.2	76.0	83.3	87.8	106.6	111.7
	Annual			1990		1991				1992
	1989	1990	1991	III	IV	I	II	III	IV P	I P
Milk production (mil. lb.)	144,239	148,319	148,525	36,611	36,301	37,425	38,633	36,255	36,212	37,949
Milk per cow (lb.)	14,244	14,646	14,867	3,617	3,577	3,705	3,864	3,647	3,651	3,851
No. of milk cows (1,000)	10,128	10,127	9,990	10,118	10,151	10,101	9,999	9,940	9,918	9,854
Milk-feed price ratio 6/	1.65	1.71	1.58	1.74	1.57	1.49	1.47	1.59	1.77	1.68
Returns over concentrate costs (\$/cwt milk)	10.18	10.39	9.00	10.50	9.03	6.30	8.10	9.00	10.50	9.70

1/ Manufacturing grade milk. 2/ Prices paid f.o.b. Central States production area. 3/ Includes products exported through the Dairy Export Incentive Program (DEIP).

4/ Milk equivalent, fat basis. 5/ Hard ice cream, ice milk, & hard sherbet. 6/ Based on average milk price after adjustment for price support deductions.

7/ Estimated. P = preliminary. — = not available.

Information contact: LaVerne T. Williams (202) 219-0770.

Table 15.—Wool

	Annual			1990		1991				1992
	1989	1990	1991	IV	I	II	III	IV	I P	
U.S. wool price, (cts./lb.) 1/	370	256	199	227	197	200	217	182	209	
Imported wool price, (cts./lb.) 2/	354	287	187	270	235	199	194	222	250	
U.S. mill consumption, scoured										
Apparel wool (1,000 lb.)	120,534	120,822	143,519	30,487	31,582	37,111	34,578	33,816	36,693	
Carpet wool (1,000 lb.)	14,122	12,124	14,363	2,138	3,085	3,118	4,561	3,588	4,598	

1/ Wool price delivered at U.S. mills, clean basis. Graded Territory 64's (20.60-22.04 microns) staple 2-3/4" & up. 2/ Wool price, Charleston, SC warehouse, clean basis, Australian 60/62's, type 64A (24 micron). Duty since 1982 has been 10.0 cents. — = not available.

Information contact: John Lawler (202) 219-0840.

Table 16.—Meat Animals

	Annual			1991			1992			
	1989	1990	1991	Apr	Nov	Dec	Jan	Feb	Mar	Apr
Cattle on feed (7 States)										
Number on feed (1,000 head) 1/	8,045	8,378	8,992	8,941	8,013	8,477	8,397	8,203	8,155	8,008
Placed on feed (1,000 head)	20,834	21,030	19,708	1,427	1,917	1,456	1,565	1,492	1,508	1,435
Marketings (1,000 head)	19,422	19,198	19,088	1,650	1,378	1,443	1,660	1,420	1,538	1,500
Other disappearance (1,000 head)	1,079	1,218	1,230	128	77	93	89	120	117	125
Beef steer—corn price ratio, Omaha 2/	30.3	32.8	31.6	32.8	30.5	29.7	29.9	31.0	30.4	31.6
Hog—corn price ratio, Omaha 2/	18.4	23.1	21.1	20.8	18.5	16.8	15.7	16.7	15.5	17.2
Market prices (\$/cwt)										
Slaughter cattle										
Choice steers, Omaha 1,000–1,100 lb.	72.52	77.40	73.83	80.77	69.60	68.64	71.20	75.71	76.58	76.93
Choice steers, Neb. Direct, 1,100–1,300 lb.	73.86	78.56	74.28	81.09	71.02	69.07	72.55	76.75	78.02	77.61
Boning utility cows, Sioux Falls	48.98	53.60	50.31	62.13	43.77	47.22	43.53	45.25	45.94	44.92
Feeder cattle										
Medium no. 1, Oklahoma City 600–700 lb.	86.66	92.15	92.74	98.52	86.60	83.08	82.41	83.95	84.80	84.57
Slaughter hogs										
Barrows & gilts, 6–markets	44.03	54.45	48.88	51.01	37.82	38.55	36.91	40.31	38.82	41.56
Feeder pigs										
S. Mo. 40–50 lb. (per head)	33.63	51.48	39.84	60.97	30.22	28.17	27.18	38.72	37.57	37.87
Slaughter sheep & lambs										
Lambs, Choice, San Angelo	67.32	55.54	52.73	55.50	52.08	64.92	58.61	57.88	67.20	74.63
Ewes, Good, San Angelo	38.58	35.21	31.98	35.50	30.75	32.92	38.88	40.88	42.60	35.00
Feeder lambs										
Choice, San Angelo	79.85	62.95	53.27	68.83	52.75	54.75	62.00	68.00	68.75	70.58
Wholesale meat prices, Midwest										
Boxed beef cut-out value	114.78	123.21	118.31	125.98	113.43	111.18	114.38	119.65	119.14	118.68
Canner & cutter cow beef	94.43	99.98	99.44	101.63	91.06	93.02	92.87	95.60	98.49	94.16
Pork loins, 14–18 lb. 3/	101.09	117.52	108.39	104.81	88.83	90.19	96.89	99.13	94.10	98.65
Pork bellies, 12–14 lb.	34.14	53.80	47.79	57.25	30.04	28.79	28.05	29.44	28.01	26.93
Hams, skinned, 14–17 lb.	69.39	87.70	91.80	75.00	81.00	84.00	—	—	—	—
All fresh beef retail price 4/	238.97	254.99	262.12	265.15	261.46	261.66	257.55	257.08	259.34	260.32
Commercial slaughter (1,000 head) 5/										
Cattle	33,918	33,241	32,690	2,742	2,578	2,562	2,927	2,439	2,668	2,587
Steers	18,539	18,587	16,732	1,438	1,263	1,299	1,450	1,255	1,369	1,355
Heifers	10,406	10,090	9,719	792	736	700	877	690	759	713
Cows	8,316	5,920	5,623	460	531	519	551	449	486	458
Bulls & stags	657	644	614	52	48	44	49	45	52	51
Calves	2,172	1,789	1,436	107	128	134	131	113	122	111
Sheep & lambs	5,466	5,854	5,722	457	467	480	484	438	497	528
Hogs	68,891	85,138	88,169	7,498	7,943	7,925	8,343	7,330	8,121	7,792
Commercial production (mil. lb.)										
Beef	22,974	22,634	22,800	1,872	1,813	1,782	2,039	1,707	1,849	1,786
Veal	344	316	296	23	26	27	28	25	27	25
Lamb & mutton	341	358	358	29	29	31	31	28	32	33
Pork	15,759	15,300	15,848	1,361	1,456	1,444	1,524	1,329	1,467	1,414

	Annual			1991				1992	
	1989	1990	1991	IV	I	II	III	IV	I
Cattle on feed (13 States)									
Number on feed (1,000 head) 1/	9,688	9,943	10,827	9,062	10,827	10,739	9,461	8,620	10,135
Placed on feed (1,000 head)	24,469	24,803	23,208	7,401	5,702	5,006	5,414	7,086	5,393
Marketings (1,000 head)	22,940	22,526	22,383	5,289	5,328	5,820	5,973	5,262	5,421
Other disappearance (1,000 head)	1,274	1,393	1,517	347	482	464	282	309	404
Hogs & pigs (10 States) 6/									
Inventory (1,000 head) 1/	43,210	42,200	42,900	44,120	42,900	41,990	44,520	46,900	45,735
Breeding (1,000 head) 1/	5,335	5,275	5,257	5,300	5,257	5,450	5,720	5,675	5,610
Market (1,000 head) 1/	37,875	36,925	37,643	38,820	37,643	36,540	38,800	41,225	40,125
Farrowings (1,000 head)	9,203	8,960	9,479	2,238	2,129	2,566	2,441	2,348	2,289
Pig crop (1,000 head)	71,807	70,589	75,035	17,459	16,770	20,832	19,278	18,551	18,475

1/ Beginning of period. 2/ Bushels of corn equal in value to 100 pounds live weight. 3/ Prior to 1984, 8–14 lb.; 1984 & 1985, 14–17 lb.; beginning 1986, 14–18 lb. 4/ New series estimating the composite price of all beef grades & ground beef sold by retail stores. This new series is in addition to, but does not replace, the series for the retail price of Choice beef that appears in table 8. 5/ Classes estimated. 6/ Quarters are Dec. of preceding year—Feb. (I), Mar.—May (II), June–Aug. (III), & Sept.–Nov. (IV). May not add to NASS totals due to rounding. — = not available. * = intentions.

Information contact: Polly Cochran (202) 219-0767.

Crops & Products

Table 17.—Supply & Utilization^{1,2}

	Area			Yield	Production	Total supply ^{4/}	Feed and residual	Other domestic use	Exports	Total use	Ending stocks	Farm price ^{5/}
	Set aside ^{3/}	Planted	Harvested									
	Mil. acres			Bu./acre				Mil. bu.				\$/bu.
Wheat												
1987/88	23.9	65.8	55.9	37.7	2,108	3,945	280	806	1,598	2,684	1,261	2.57
1988/89	22.5	65.5	53.2	34.1	1,812	3,096	146	829	1,419	2,394	702	3.72
1989/90	9.6	78.6	62.2	32.7	2,037	2,782	143	849	1,233	2,225	536	3.72
1990/91*	7.5	77.2	69.3	39.5	2,736	3,309	600	875	1,068	2,443	866	2.61
1991/92*	15.9	69.9	57.7	34.3	1,981	2,884	325	875	1,280	2,480	423	3.03
1992/93*	7.0	**70.1	—	—	2,187	2,650	150	898	1,175	2,223	427	3.25-3.65
Rice												
1987/88	1.57	2.36	2.33	5,555	129.6	184.0	—	6/ 80.4	72.2	152.8	31.4	7.27
1988/89	1.09	2.93	2.90	5,514	159.9	195.1	—	6/ 82.5	85.9	168.4	26.7	6.83
1989/90	1.18	2.73	2.69	5,749	154.5	185.8	—	6/ 82.1	77.2	159.3	26.3	7.35
1990/91*	1.04	2.90	2.82	5,529	156.1	187.2	—	6/ 91.7	70.9	162.8	24.6	6.70
1991/92*	0.9	2.86	2.75	5,817	154.5	185.0	—	6/ 92.8	60.0	152.8	32.2	7.45-7.55
1992/93*	0.4	**3.00	—	—	168.0	204.6	—	6/ 94.3	74.0	168.3	38.3	6.25-7.25
Corn												
1987/88	23.1	66.2	59.5	119.8	7,131	12,019	4,798	1,243	1,718	7,757	4,259	1.94
1988/89	20.6	67.7	59.3	84.6	4,929	9,191	3,941	1,293	2,026	7,260	1,930	2.54
1989/90	10.8	72.2	64.7	116.3	7,525	9,458	4,369	1,356	2,368	8,113	1,344	2.36
1990/91*	10.7	74.2	67.0	118.5	7,934	9,262	4,669	1,367	1,725	7,701	1,521	2.28
1991/92*	7.4	76.0	68.8	108.6	7,474	9,018	4,800	1,445	1,550	7,895	1,121	2.35-2.45
1992/93*	5.3	**79.0	—	—	8,575	9,708	5,000	1,485	1,550	8,035	1,671	1.90-2.30
Sorghum												
1987/88	4.1	11.8	10.5	69.4	731	1,474	555	25	232	812	663	1.70
1988/89	3.9	10.3	9.0	63.8	577	1,239	488	22	312	800	440	2.27
1989/90	3.3	12.6	11.1	55.4	615	1,056	618	15	303	835	220	2.10
1990/91*	3.3	10.5	9.1	63.1	573	793	405	14	232	651	143	2.12
1991/92*	2.5	11.0	9.8	59.0	579	722	345	15	260	620	102	2.25-2.35
1992/93*	1.9	**12.1	—	—	700	802	425	15	245	685	117	1.75-2.15
Barley												
1987/88	2.9	10.9	10.0	52.4	521	869	253	174	121	548	321	1.81
1988/89	2.8	9.8	7.6	38.0	290	622	171	175	79	425	196	2.80
1989/90	2.3	9.1	8.3	48.8	404	614	193	175	84	453	161	2.42
1990/91*	2.9	8.2	7.5	58.1	422	598	205	178	81	461	135	2.14
1991/92*	2.2	8.9	8.4	55.2	464	625	225	175	100	500	125	2.10
1992/93*	2.1	**8.3	—	—	420	565	185	175	90	450	115	1.85-2.25
Oats												
1987/88	0.8	17.9	8.9	54.3	374	552	358	81	1	440	112	1.58
1988/89	0.3	13.9	5.5	39.3	218	393	194	100	1	294	98	2.61
1989/90	0.4	12.1	6.9	54.3	374	538	268	115	1	381	157	1.49
1990/91*	0.2	10.4	5.9	60.1	358	578	286	120	1	407	171	1.14
1991/92*	0.6	8.7	4.8	60.8	243	489	245	125	1	371	118	1.20
1992/93*	0.7	**8.3	—	—	275	458	210	130	1	341	117	1.05-1.45
Soybeans												
1987/88	0	58.2	57.2	33.9	1,938	2,375	7/ 97	1,174	802	2,073	302	5.88
1988/89	0	58.8	57.4	27.0	1,549	1,855	7/ 88	1,058	527	1,673	182	7.42
1989/90	0	60.8	59.5	32.3	1,924	2,109	7/ 101	1,146	623	1,870	239	5.89
1990/91*	0	57.8	56.5	34.0	1,928	2,167	7/ 94	1,187	557	1,838	329	5.74
1991/92*	0	59.1	58.0	34.3	1,988	2,320	7/ 95	1,235	690	2,020	300	5.60
1992/93*	0	**57.4	—	—	1,915	2,220	7/ 95	1,235	650	1,980	240	5.00-6.50
Soybean oil												
1987/88	—	—	—	—	12,974	14,895	—	10,930	1,873	12,803	2,092	22.67
1988/89	—	—	—	—	11,737	13,967	—	10,591	1,881	12,252	1,715	21.10
1989/90	—	—	—	—	13,004	14,741	—	12,083	1,353	13,436	1,305	22.30
1990/91*	—	—	—	—	13,408	14,730	—	12,164	780	12,944	1,786	21.00
1991/92*	—	—	—	—	14,080	15,875	—	12,250	1,425	13,675	2,200	19.00
1992/93*	—	—	—	—	14,080	16,285	—	12,450	1,400	13,850	2,435	17.0-21.0
Soybean meal												
1987/88	—	—	—	—	28,060	26,300	—	21,293	6,854	28,147	153	222
1988/89	—	—	—	—	24,943	25,100	—	19,657	5,270	24,927	173	233
1989/90	—	—	—	—	27,719	27,900	—	22,263	5,319	27,582	318	174
1990/91*	—	—	—	—	28,325	26,666	—	22,912	5,469	28,381	285	170
1991/92*	—	—	—	—	29,210	29,550	—	23,050	6,200	29,250	300	175
1992/93*	—	—	—	—	29,325	29,650	—	23,200	6,150	29,350	300	185-195

See footnotes at end of table.

Table 17.—Supply & Utilization, continued

	Area			Yield	Production	Total supply 4/	Feed and resid- ual	Other domes- tic use	Ex- ports	Total use	Ending Stocks	Farm price 5/
	Set Aside 3/	Planted	Harves- ted									
	Mil. acres		Lb./acre		Mil. bales							
Cotton 10/												
1987/88	4.0	10.4	10.0	706	14.8	19.8	—	7.6	6.6	14.2	5.8	64.30
1988/89	2.2	12.5	11.9	819	15.4	21.2	—	7.8	6.1	13.9	7.1	56.60
1989/90	3.5	10.8	9.5	614	12.2	19.3	—	8.8	7.7	18.5	3.0	66.20
1990/91*	2.0	12.3	11.7	634	15.5	18.5	—	8.7	7.8	16.5	2.3	68.20
1991/92*	1.2	14.1	13.0	652	17.8	20.0	—	9.5	6.8	16.3	3.8	11/ 58.3
1992/93*	1.8	**13.5	—	—	17.2	21.0	—	9.6	7.0	18.5	4.6	—

* June 10, 1992 Supply & Demand Estimates. 1/ Marketing year beginning June 1 for wheat, barley, & oats; August 1 for cotton & rice; September 1 for soybeans, corn, & sorghum; October 1 for soybean meal & soybean oil. 2/ Conversion factors: Hectare (ha.) = 2.471 acres; 1 metric ton = 2,204,622 pounds; 36.7437 bushels of wheat or soybeans; 39.3679 bushels of corn or sorghum; 45.9296 bushels of barley; 68.8944 bushels of oats; 22.046 cwt of rice; & 4.59 480-pound bales of cotton. 3/ Includes diversion, acreage reduction, 50-92, & 0-92 programs. 4/ 92 & 50/92 set-aside includes idled acreage & acreage planted to minor oilseeds. Data for 1992/93 are preliminary. 5/ Includes imports. 6/ Marketing-year weighted average price received by farmers. Does not include an allowance for loans outstanding & Government purchases. 6/ Residual included in domestic use. 7/ Includes seed. 8/ Simple average of crude soybean oil, Decatur. 9/ Simple average of 44 percent, Decatur. 10/ Upland & extra long staple. Stocks estimates based on Census Bureau data, resulting in an unaccounted difference between supply & use estimates & changes in ending stocks. 11/ Weighted average for August-March; not a projection for the marketing year. — = not available or not applicable. ** Prospective plantings.

Information contact: Commodity Economics Division, Crops Branch (202) 219-0840.

Table 18.—Cash Prices, Selected U.S. Commodities

	Marketing year 1/				1991		1992			
	1987/88	1988/89	1989/90	1990/91	Apr	Dec	Jan	Feb	Mar	Apr
Wheat, No. 1 HRW, Kansas City (\$/bu.) 2/	2.96	4.17	4.22	2.94	2.98	4.06	4.66	4.51	4.33	4.02
Wheat, DNS, Minneapolis (\$/bu.) 3/	3.15	4.36	4.18	3.06	3.07	4.11	4.36	4.56	4.36	4.28
Rice, S.W. La. (\$/cwt) 4/	19.25	14.85	15.55	15.25	18.40	17.30	17.30	17.30	16.60	16.40
Corn, no. 2 yellow, 30 day, Chicago (\$/bu.)	2.14	2.68	2.54	2.40	2.59	2.50	2.59	2.67	2.72	2.58
Sorghum, no. 2 yellow, Kansas City (\$/cwt)	3.40	4.17	4.21	4.08	4.34	4.35	4.44	4.62	4.78	4.41
Barley, feed, Duluth (\$/bu.) 5/	1.78	2.32	2.20	2.13	2.12	2.18	2.20	2.28	2.30	2.35
Barley, malting, Minneapolis (\$/bu.)	2.04	4.11	3.28	2.42	2.48	2.54	2.51	2.51	2.50	2.50
U.S. price, SLM, 1-1/16 in. (cts./lb.) 6/	63.1	57.7	69.8	74.8	79.9	53.9	51.5	50.8	52.0	55.0
Northern Europe prices index (cts./lb.) 7/	72.3	66.4	82.3	82.9	83.2	61.8	59.3	56.3	55.3	58.2
U.S. M 1-3/32 in. (cts./lb.) 8/	76.3	69.2	83.6	88.2	96.8	64.3	61.5	60.3	59.8	62.7
Soybeans, no. 1 yellow, 30 day, Chicago (\$/bu.)	6.67	7.41	5.86	5.76	5.84	5.54	5.66	5.73	5.86	5.73
Soybean oil, crude, Decatur (cts./lb.)	22.70	21.10	22.30	21.00	21.50	18.99	18.77	18.88	19.74	19.00
Soybean meal, 44% protein, Decatur (\$/ton)	221.90	233.50	173.75	169.78	171.50	170.70	172.70	174.30	174.20	174.80

1/ Beginning June 1 for wheat & barley; Aug. 1 for rice & cotton; Sept. 1 for corn, sorghum & soybeans; Oct. 1 for soybean meal & oil. 2/ Ordinary protein. 3/ 14% protein. 4/ Long grain, milled basis. 5/ Beginning Mar. 1987 reporting point changed from Minneapolis to Duluth. 6/ Average spot market. 7/ Liverpool Cottonlook (A) index; average of five lowest prices of 12 selected growths. 8/ Memphis territory growths.

Information contacts: Wheat & feed grains, Joy Harwood & Angela Stewart (202) 219-0840; Cotton, Les Meyer (202) 219-0840; Soybeans, Brenda Toland, (202) 219-0840.

Table 19.—Farm Programs, Price Supports, Participation & Payment Rates

	Target price	Basic loan rate	Findley- or announced loan rate 1/	Payment rates			Effective base acres 2/	Program 3/	Participation rate 4/
				Paid land diversion					
				Total deficiency	Mandatory	Optional		Percent of base	Percent of base
				\$/bu.			Mil. acres		
Wheat									
1987/88	4.38	2.85	2.28	1.81	—	—	87.6	27.5/0/0	88
1988/89	4.23	2.78	2.21	0.69	—	—	84.8	27.5/0/0	86
1989/90	4.10	2.68	2.06	0.32	—	—	82.3	10/0/0	78
1990/91 6/	4.00	2.44	1.95	1.28	—	—	80.6	7/ 5/0/0	83
1991/92	4.00	2.52	2.04	*1.35	—	—	79.2	15/0/0	85
1992/93	4.00	2.58	2.21	**0.65	—	—	79.0	5/0/0	82
1993/94	4.00	2.86	2.45	—	—	—	—	0/0/0	—
				\$/cwt					
Rice									
1986/87 5/	11.90	7.20	8/ 3.94	4.70	—	—	4.2	35/0/0	94
1987/88	11.68	6.84	8/ 5.79	4.82	—	—	4.2	35/0/0	96
1988/89	11.15	6.53	8/ 6.21	4.31	—	—	4.2	25/0/0	94
1989/90	10.80	6.50	8/ 5.71	3.58	—	—	4.2	25/0/0	94
1990/91 6/	10.71	6.50	8/ 5.08	4.21	—	—	4.2	20/0/0	94
1991/92	10.71	6.50	—	3.07	—	—	4.2	5/0/0	95
1992/93	10.71	6.50	—	**3.51	—	—	4.1	0/0/0	93
				\$/bu.					
Corn									
1986/87 5/	3.03	2.40	1.92	1.11	0.73	—	81.7	17.5/2.5/0	86
1987/88	3.03	2.28	1.82	1.09	—	2.00	81.5	20/0/15	91
1988/89	2.93	2.21	1.77	0.36	—	1.75	82.9	20/0/10	87
1989/90	2.84	2.06	1.85	0.58	—	—	82.7	10/0/0	80
1990/91 6/	2.75	1.96	1.57	0.53	—	—	82.6	10/0/0	77
1991/92	2.75	1.89	1.62	*0.41	—	—	82.7	7.5/0/0	77
1992/93	2.75	2.01	1.72	**0.48	—	—	82.2	5/0/0	75
				\$/bu.					
Sorghum									
1986/87 5/	2.88	2.28	1.82	1.06	0.65	—	19.0 9/	17.5/2.5/0	74
1987/88	2.88	2.17	1.74	1.14	—	1.90	17.4	20/0/15	85
1988/89	2.78	2.10	1.68	0.48	—	1.65	16.8	20/0/10	82
1989/90	2.70	1.96	1.57	0.68	—	—	16.2	10/0/0	71
1990/91 6/	2.61	1.88	1.49	0.58	—	—	15.4	10/0/0	70
1991/92	2.61	1.80	1.54	*0.37	—	—	13.5	7.5/0/0	77
1992/93	2.61	1.91	1.63	**0.48	—	—	13.6	5/0/0	77
				\$/bu.					
Barley									
1986/87 5/	2.60	1.85	1.56	0.99	0.57	—	12.4 9/	17.5/2.5/0	72
1987/88	2.60	1.85	1.49	0.79	—	1.80	12.5	20/0/15	85
1988/89	2.51	1.80	1.44	0.00	—	1.40	12.4	20/0/10	79
1989/90	2.43	1.68	1.34	0.00	—	—	12.3	10/0/0	67
1990/91 6/	2.36	1.60	1.26	0.22	—	—	11.9	10/0/0	68
1991/92	2.36	1.54	1.32	*0.82	—	—	11.5	7.5/0/0	78
1992/93	2.36	1.64	1.40	**0.35	—	—	11.1	5/0/0	74
				\$/bu.					
Oats									
1986/87 5/	1.80	1.23	0.99	0.39	0.36	—	9.2 9/	17.5/2.5/0	38
1987/88	1.80	1.17	0.94	0.20	—	0.80	8.4	20/0/15	45
1988/89	1.55	1.14	0.90	0.00	—	—	7.9	5/0/0	30
1989/90	1.50	1.06	0.85	0.00	—	—	7.6	5/0/0	18
1990/91 6/	1.45	1.01	0.81	0.33	—	—	7.5	5/0/0	09
1991/92	1.45	0.97	0.83	*0.35	—	—	7.3	0/0/0	38
1992/93	1.45	1.03	0.88	**0.15	—	—	7.3	0/0/0	40
				\$/bu.					
Soybeans 10/									
1986/87 5/	—	—	4.77	—	—	—	—	—	—
1987/88	—	—	4.77	—	—	—	—	—	—
1988/89	—	—	4.77	—	—	—	—	—	—
1989/90	—	—	4.53	—	—	—	—	11/ 10/25	—
1990/91 6/	—	—	4.50	—	—	—	—	11/ 0/25	—
1991/92	—	—	5.02	—	—	—	—	11/ 0/25	—
1992/93	—	—	5.02	—	—	—	—	11/ 0/25	—
				Cts./lb.					
Upland cotton									
1986/87 5/	81.0	55.00	12/ 44.00	26.00	—	—	15.5	25/0/0	92
1987/88	79.4	52.25	13/ 60.00	17.3	—	—	14.5	25/0/0	93
1988/89	75.9	51.80	13/ 51.89	19.4	—	—	14.5	12.5/0/0	89
1989/90	73.4	50.00	13/ 65.05	13.1	—	—	14.6	25/0/0	89
1990/91 6/	72.9	50.27	13/ 53.00	7.3	—	—	14.4	12.5/0/0	86
1991/92 14/	72.9	50.77	13/ —	10.1	—	—	14.6	5/0/0	84
1992/93	72.9	52.35	13/ —	**15.0	—	—	14.9	10/0/0	87

1/ There are no Findley loan rates for rice or cotton. See footnotes 8/, 12/, & 13/. 2/ National effective crop acreage base as determined by ASCS. Net of CRP. 3/ Program requirements for participating producers (mandatory acreage reduction program/mandatory paid land diversion/optional paid land diversion). Acres idled must be devoted to a conserving use to receive program benefits. 4/ Percentage of effective base acres enrolled in acreage reduction programs. 5/ Payments & loans received in cash were reduced by 4.3 percent in 1986/87 due to Gramm-Rudman-Hollings. 6/ Payments & loans were reduced by 1.4 percent in 1990/91 due to Gramm-Rudman-Hollings. Budget Reconciliation Act reductions to deficiency payments rates were also in effect in that year. Data do not include these reductions. 7/ Under 1990 modified contracts, participating producers plant up to 105 percent of their wheat base acres. For every acre planted above 95 percent of base, the acreage used to compute deficiency payments was cut by 1 acre. 8/ A marketing loan has been in effect for rice since 1985/86. Loans may be repaid at the lower of: a) the loan rate or b) the adjusted world market price (announced weekly). However, loans cannot be repaid at less than a specified fraction of the loan rate. Data refer to annual average adjusted world prices. 9/ The sorghum, oats, & barley programs are the same as for corn except as indicated. 10/ There are no target prices, base acres, acreage reduction programs, or deficiency payment rates for soybeans. 11/ Nominal percentage of program crop base acres permitted to shift into soybeans without loss of base. 12/ A marketing loan has been in effect for cotton since 1986/87. The loan repayment rate was fixed at 80 percent of the loan rate in 1986/87 (Plan A), 13/ in 1987/88 & after, loans may be repaid at the lower of: a) the loan rate or b) the adjusted world market price (announced weekly; Plan B). Starting in 1991/92, loans cannot be repaid at less than 70 percent of the loan rate. Data refer to annual average adjusted world prices. 14/ A marketing certificate program was implemented on Aug. 1, 1991. — = not available.

* For wheat & feed grains, the 1991/92 rate is the regular (5-month) deficiency payment rate. For the winter wheat option, the 5-month rate is \$1.25. For upland cotton & rice, the rate is the total payment rate. ** Estimated total deficiency payment rate. Minimum guaranteed payment rate for 0/92 (wheat & feed grains) & 50/92 (rice & upland cotton) programs.

Table 20.—Fruit

	1983	1984	1985	1986	1987	1988	1989	1990	1991 P
Citrus 1/									
Production (1,000 ton)	13,682	10,832	10,525	11,058	11,993	12,761	13,186	10,860	12,218
Per capita consumpt. (lbs.) 2/	29.5	24.0	22.6	26.0	25.8	26.4	25.4	22.4	—
Noncitrus 3/									
Production (1,000 tons)	14,168	14,301	14,191	13,874	16,011	15,893	16,365	15,655	15,504
Per capita consumpt. (lbs.) 2/	63.6	67.7	66.7	69.8	75.4	72.7	74.3	69.8	—
	1991				1992				
	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr
F.o.b. shipping point prices									
Apples (\$/carton) 4/	14.00	19.20	14.00	14.00	14.00	13.73	21.13	15.00	15.00
Pears (\$/box) 5/	—	13.00	13.00	13.00	13.00	12.50	21.25	13.50	13.68
Grower prices									
Oranges (\$/box) 6/	20.81	21.97	11.09	5.19	6.31	5.93	6.90	6.04	6.59
Grapefruit (\$/box) 6/	2.86	1.38	6.24	6.16	5.95	5.92	5.68	7.11	7.65
Stocks, ending									
Fresh apples (mil. lbs.)	17.7	2,723.6	5,133.7	4,461.5	3,703.6	2,952.9	2,315.4	1,623.1	1,073.3
Fresh pears (mil. lbs.)	137.5	456.3	420.8	335.4	217.2	181.5	152.7	93.6	57.0
Frozen fruits (mil. lbs.)	833.2	671.6	1,027.9	983.4	892.4	803.6	741.6	634.1	583.6
Frozen orange juice (mil. lbs.)	876.9	765.2	584.2	617.3	952.7	1,130.7	1,149.7	1,102.9	1,294.1

1/ 1991 indicated 1990/91 season. 2/ Fresh per capita consumption. 3/ Calendar year. 4/ Red delicious, Washington, extra fancy, carton tray pack, 125's. 5/ D'Anjou, Washington, standard box wrapped, U.S. no. 1, 135's. 6/ U.S. equivalent on-tree returns. P = preliminary. — = not available.

Information contact: Wynne Napper (202) 219-0884.

Table 21.—Vegetables

	Calendar year									
	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Production										
Total vegetables (1,000 cwt)	430,795	403,509	458,334	453,030	448,629	478,381	468,779	542,437	561,704	564,300
Fresh (1,000 cwt) 1/ 3/	193,451	185,782	201,817	203,549	203,165	220,539	228,397	239,281	239,104	229,007
Processed (tons) 2/ 3/	11,867,170	10,888,350	12,725,880	12,474,040	12,273,200	12,892,100	12,019,110	15,157,790	16,130,020	16,764,670
Mushrooms (1,000 lbs.) 4/	490,826	581,531	595,681	587,956	614,393	631,819	667,759	714,892	749,488	—
Potatoes (1,000 cwt)	355,131	333,726	362,039	406,609	361,743	389,320	356,438	370,444	402,110	418,229
Sweetpotatoes (1,000 cwt)	14,833	12,083	12,902	14,573	12,368	11,611	10,945	11,358	12,594	11,496
Dry edible beans (1,000 cwt)	25,683	15,520	21,070	22,298	22,960	26,031	19,253	23,729	32,379	32,963
	1991				1992					
	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr
Shipments										
Fresh (1,000 cwt) 5/	29,105	17,211	15,711	20,930	17,354	16,583	22,759	17,429	17,527	26,955
Potatoes (1,000 cwt)	10,720	8,796	9,541	13,069	12,277	11,386	14,747	12,213	14,325	22,793
Sweetpotatoes (1,000 cwt)	151	93	220	403	820	433	301	295	247	387

1/ Includes fresh production of asparagus, broccoli, carrots, cauliflower, celery, sweet corn, lettuce, honeydews, onions, & tomatoes. 2/ Includes processing production of snap beans, sweet corn, green peas, tomatoes, cucumbers (for pickles), asparagus, broccoli, carrots, & cauliflower. 3/ Asparagus & cucumber estimates were not available for 1982 & 1983. 4/ Fresh & processing agaricus mushrooms only. Excludes specialty varieties. Crop year July 1 - June 30. 5/ Includes snap beans, broccoli, cabbage, carrots, cauliflower, celery, sweet corn, cucumbers, eggplant, lettuce, onions, bell peppers, squash, tomatoes, cantaloupes, honeydews, & watermelons.

Information contacts: Gary Lucier or Cathy Greene (202) 219-0884.

Table 22.—Other Commodities

	Annual					1990					1991			
	1987	1988	1989	1990	1991	Oct-Dec	Jan-Mar	Apr-June	July-Sept	Oct-Dec				
Sugar														
Production 1/	7,309	7,087	6,841	6,335	7,139	3,435	2,206	625	647	3,661				
Deliveries 1/	9,167	8,188	8,340	8,661	8,698	2,311	2,019	2,103	2,340	2,238				
Stocks, ending 1/	3,195	3,132	2,946	2,729	2,923	2,729	3,530	2,487	1,513	2,923				
Coffee														
Composite green price N.Y. (cts/lb.)	109.14	119.59	96.17	76.93	70.09	76.85	74.94	72.13	68.18	64.84				
Imports, green bean equiv. (mil. lbs.) 2/	2,638	2,072	2,630	2,714	2,572	616	748	563	562	699				
	Annual				1990	1991								
	1988	1989	1990	Oct	May	June	July	Aug	Sept	Oct				
Tobacco														
Prices at auctions 3/														
Flue-cured (\$/lb.)	1.61	1.67	1.67	1.72	—	—	—	1.66	1.77	1.78				
Burley (\$/lb.)	1.61	1.67	1.75	—	—	—	—	—	—	—				
Domestic consumption 4/														
Cigarettes (bil.)	562.5	540.1	523.1	44.0	49.3	45.8	44.0	42.3	43.4	40.5				
Large cigars (mil.)	2,531	2,487.6	2,343.4	161.1	169.1	218.8	170.2	205.8	183.4	193.1				

1/ 1,000 short tons, raw value. Quarterly data shown at end of each quarter. 2/ Net imports of green & processed coffee. 3/ Crop year July-June for flue-cured; Oct.-Sept. for burley. 4/ Taxable removals. — = not available.

Information contacts: sugar, Peter Buzzanell (202) 219-0886, coffee, Fred Gray (202) 219-0888, tobacco, Verner Gries (202) 219-0890.

World Agriculture

Table 23.—World Supply & Utilization of Major Crops, Livestock & Products

	1986/87	1987/88	1988/89	1989/90	1990/91	1991/92 P	1992/93 F
Million units							
Wheat							
Area (hectares)	228.2	219.9	217.6	225.9	231.9	221.6	
Production (metric tons)	524.8	496.4	495.7	533.3	589.0	542.2	547.8
Exports (metric tons) 1/	90.7	107.6	97.3	97.0	94.1	106.9	101.1
Consumption (metric tons) 2/	513.0	523.9	524.1	527.5	567.2	554.7	549.2
Ending stocks (metric tons) 3/	177.6	148.4	118.0	120.9	142.7	130.2	128.9
Coarse grains							
Area (hectares)	335.1	323.0	323.3	320.9	314.2	319.9	
Production (metric tons)	822.8	784.6	721.2	792.8	820.3	799.0	837.2
Exports (metric tons) 1/	82.5	84.5	96.2	102.1	86.0	91.1	86.5
Consumption (metric tons) 2/	795.6	803.5	785.9	819.7	806.8	805.1	821.8
Ending stocks (metric tons) 3/	233.3	213.0	149.1	123.7	137.1	131.0	146.4
Rice, milled							
Area (hectares)	145.3	141.9	145.8	146.7	147.0	145.8	
Production (metric tons)	318.2	316.1	331.8	344.1	352.3	346.4	354.3
Exports (metric tons) 4/	11.8	12.2	13.5	12.6	11.7	12.5	13.4
Consumption (metric tons) 2/	320.6	321.5	328.1	338.0	346.9	350.9	354.4
Ending stocks (metric tons) 3/	51.4	46.0	48.3	55.0	59.5	54.3	54.3
Total grains							
Area (hectares)	708.6	684.8	686.5	693.5	693.1	687.3	
Production (metric tons)	1,685.6	1,597.1	1,548.7	1,640.2	1,761.6	1,687.6	1,739.3
Exports (metric tons) 1/	185.0	204.3	207.0	211.7	193.8	210.5	201.0
Consumption (metric tons) 2/	1,629.2	1,648.9	1,638.1	1,685.2	1,720.9	1,710.7	1,725.4
Ending stocks (metric tons) 3/	462.3	407.4	315.4	299.6	339.3	315.5	329.6
Oilseeds							
Crush (metric tons)	161.8	168.4	166.3	173.3	178.5	184.5	
Production (metric tons)	194.9	210.5	204.1	214.3	217.9	223.8	223.0
Exports (metric tons)	37.7	39.5	32.0	36.0	33.7	36.2	
Ending stocks (metric tons)	23.3	24.0	22.2	23.3	23.3	23.2	
Meals							
Production (metric tons)	110.7	115.4	112.2	118.0	120.7	124.4	
Exports (metric tons)	36.7	35.8	37.9	39.1	39.9	40.3	
Oils							
Production (metric tons)	50.4	53.3	53.9	57.7	59.0	60.4	
Exports (metric tons)	16.9	17.5	18.3	20.0	20.2	20.3	
Cotton							
Area (hectares)	29.3	30.8	33.7	31.5	33.0	34.4	
Production (bales)	70.6	81.1	84.4	79.8	85.9	94.9	94.0
Exports (bales)	25.9	23.1	25.8	23.9	23.0	22.4	24.0
Consumption (bales)	82.8	84.1	85.2	86.6	85.5	85.5	89.0
Ending stocks (bales)	35.9	33.0	32.2	26.4	28.8	38.8	43.6
	1986	1987	1988	1989	1990	1991 P	1992 F
Million							
Red meat							
Production (metric tons)	109.8	112.8	118.5	117.9	120.0	119.1	118.8
Consumption (metric tons)	108.6	110.8	114.5	116.6	117.8	117.1	117.4
Exports (metric tons) 1/	6.8	6.7	7.1	7.2	7.3	7.7	7.7
Poultry 5/							
Production (metric tons)	30.2	31.4	33.1	34.3	36.2	37.7	39.0
Consumption (metric tons)	29.9	31.0	32.7	33.9	35.8	37.1	38.5
Exports (metric tons) 1/	1.3	1.5	1.7	1.8	2.1	2.2	2.3
Dairy							
Milk production (metric tons)	425.9	425.7	429.0	434.9	442.0	429.2	424.8

1/ Excludes intra-EC trade. 2/ Where stocks data not available (excluding USSR), consumption includes stock changes. 3/ Stocks data are based on differing marketing years & do not represent levels at a given date. Data not available for all countries; includes estimated change in USSR grain stocks but not absolute level. 4/ Calendar year data. 1987 data correspond with 1986/87, etc. 5/ Poultry excludes the Peoples Republic of China before 1986. P = preliminary. F = forecast.

Information contacts: Crops, Carol Whitton (202) 219-0824; red meat & poultry, Linda Bailey (202) 219-1285; dairy, Sara Short (202) 219-0770.

U.S. Agricultural Trade

Table 24.—Prices of Principal U.S. Agricultural Trade Products

	Annual			1991			1992			
	1989	1990	1991	Apr	Nov	Dec	Jan	Feb	Mar	Apr
Export commodities										
Wheat, f.o.b. vessel, Gulf ports (\$/bu.)	4.65	3.72	3.52	3.31	4.09	4.40	4.65	4.83	4.83	4.36
Corn, f.o.b. vessel, Gulf ports (\$/bu.)	2.85	2.79	2.75	2.81	2.74	2.73	2.79	2.91	2.97	2.79
Grain sorghum, f.o.b. vessel, Gulf ports (\$/bu.)	2.70	2.65	2.69	2.79	2.70	2.76	2.86	2.98	3.06	2.79
Soybeans, f.o.b. vessel, Gulf ports (\$/bu.)	7.06	6.24	6.05	6.20	5.97	5.91	6.00	6.06	6.19	6.05
Soybean oil, Decatur (cts./lb.)	20.21	22.75	20.14	21.48	18.52	18.67	18.81	18.65	19.58	18.84
Soybean meal, Decatur (\$/ton)	218.59	169.37	172.90	171.32	178.38	171.38	172.43	173.86	174.89	174.43
Cotton, 8-market avg. spot (cts./lb.)	63.78	71.25	69.69	79.93	54.70	53.89	51.53	50.76	52.01	54.97
Tobacco, avg. price at auction (cts./lb.)	161.74	168.06	173.53	171.12	181.93	179.98	175.95	174.92	195.50	162.04
Rice, f.o.b. mill, Houston (\$/cwt)	15.68	15.52	16.48	16.00	17.00	17.50	17.50	17.50	17.50	17.50
Inedible tallow, Chicago (cts./lb.)	14.71	13.54	13.26	13.57	13.21	12.50	12.25	12.63	12.68	13.25
Import commodities										
Coffee, N.Y. spot (\$/lb.)	1.04	0.81	0.71	0.80	0.59	0.57	0.57	0.51	0.53	0.49
Rubber, N.Y. spot (cts./lb.)	50.65	46.28	45.73	45.82	44.75	44.15	43.11	43.95	44.51	45.88
Cocoa beans, N.Y. (\$/lb.)	0.55	0.55	0.52	0.50	0.57	0.59	0.56	0.51	0.49	0.44

Information contact: Mary Teymourian (202) 219-0824.

Table 25.—Indexes of Real Trade-Weighted Dollar Exchange Rates ^{1/}

	1991							1992				
	June	July	Aug	Sept	Oct	Nov	Dec P	Jan P	Feb P	Mar P	Apr P	May P
	1985 = 100											
Total U.S. trade 2/	69.3	69.1	68.2	66.6	66.0	63.9	62.4	62.4	63.7	65.6	65.2	65.0
Agricultural trade												
U.S. markets	80.8	80.5	79.8	78.4	78.3	77.1	76.3	75.5	76.2	77.6	77.4	77.3
U.S. competitors	77.9	77.8	76.9	75.8	77.0	76.4	76.2	76.0	76.6	78.8	75.9	75.8
Wheat												
U.S. markets	98.6	98.9	98.1	96.3	97.4	96.9	96.7	95.4	95.9	96.8	96.1	95.8
U.S. competitors	72.1	71.9	71.1	70.3	69.9	69.4	69.6	70.1	71.2	71.6	71.0	71.1
Soybeans												
U.S. markets	70.2	69.7	68.8	67.4	66.7	65.0	63.8	63.2	63.8	65.8	65.8	65.6
U.S. competitors	56.8	55.6	54.8	54.1	56.0	58.4	57.7	57.4	57.6	58.0	57.0	57.2
Corn												
U.S. markets	74.6	74.1	73.7	72.3	71.3	70.2	69.5	68.4	69.2	70.7	70.7	70.6
U.S. competitors	65.7	65.1	64.3	62.8	62.5	61.4	60.4	60.0	60.6	61.0	60.3	59.9
Cotton												
U.S. markets	75.8	75.5	75.1	74.1	73.6	72.7	72.2	71.7	72.4	73.7	73.2	73.1
U.S. competitors	89.4	88.8	88.4	86.8	96.9	97.5	96.9	95.9	95.6	95.4	94.9	94.6

^{1/} Real indexes adjust nominal exchange rates for differences in rates of inflation, to avoid the distortion caused by high-inflation countries. A higher value means the dollar has appreciated. See the October 1988 issue of Agricultural Outlook for a discussion of the calculations and the weights used. ^{2/} Federal Reserve Board Index of trade-weighted value of the U.S. dollar against 10 major currencies. Weights are based on relative importance in world financial markets. P = preliminary.

Information contact: Tim Baxter, David Stallings (202) 219-0718.

Table 26.—Trade Balance

	Fiscal year ^{1/}								Mar
	1985	1986	1987	1988	1989	1990	1991	1992 F	1992
	\$ million								
Exports									
Agricultural	31,201	28,312	27,878	35,318	39,590	40,220	37,609	41,000	3,739
Nonagricultural	179,236	179,291	202,911	258,656	301,269	328,059	356,682	—	33,901
Total 2/	210,437	205,603	230,787	293,972	340,859	366,279	394,291	—	37,640
Imports									
Agricultural	19,740	20,884	20,650	21,014	21,476	22,560	22,588	23,000	2,132
Nonagricultural	313,722	342,846	367,374	409,138	441,075	458,101	463,720	—	40,613
Total 3/	333,462	363,730	388,024	430,152	462,551	480,661	486,308	—	42,745
Trade balance									
Agricultural	11,461	5,428	7,226	14,302	18,114	17,660	15,021	18,000	1,607
Nonagricultural	-134,486	-163,555	-164,483	-150,482	-139,808	-132,042	-107,038	—	-6,712
Total	-123,025	-158,127	-157,237	-136,180	-121,692	-114,382	-92,017	—	-5,105

^{1/} Fiscal years begin October 1 & end September 30. Fiscal year 1991 began Oct. 1, 1990 & ended Sept. 30, 1991. ^{2/} Domestic exports including Department of Defense shipments (F.A.S. value). ^{3/} Imports for consumption (customs value). F = forecast. — = not available.

Information contact: Stephen MacDonald (202) 219-0822.

Table 27.—U.S. Agricultural Exports & Imports

	Fiscal year*			Mar	Fiscal year*			Mar
	1990	1991	1992 F	1992	1990	1991	1992 F	1992
	1,000 units				\$ million			
EXPORTS								
Animals, live (no.) 1/	685	1,235	—	115	381	546	—	34
Meats & preps., excl. poultry (mt)	873	937	2/ 900	90	2,457	2,774	—	268
Dairy products (mt) 1/	105	43	—	22	358	293	600	60
Poultry meats (mt)	583	628	700	69	679	737	—	78
Fats, oils, & greases (mt)	1,265	1,169	1,300	133	459	419	—	45
Hides & skins incl. furskins	—	—	—	—	1,794	1,453	—	125
Cattle hides, whole (no.) 1/	23,920	21,608	—	1,785	1,412	1,193	—	99
Mink pelts (no.) 1/	5,128	3,941	—	612	116	74	—	7
Grains & feeds (mt)	112,925	100,016	—	8,254	15,698	12,206	3/ 13,500	1,187
Wheat (mt)	28,068	26,708	34,500	2,804	4,212	2,857	4/ 4,400	363
Wheat flour (mt)	851	1,076	900	91	198	202	—	19
Rice (mt)	2,491	2,401	2,100	204	830	749	700	71
Feed grains, incl. products (mt)	69,384	52,337	48,200	4,084	8,094	5,789	5,400	490
Feeds & fodders (mt)	11,153	16,389	5/ 11,800	952	1,828	1,914	—	173
Other grain products (mt)	978	1,105	—	119	538	695	—	70
Fruits, nuts, & preps. (mt)	2,872	2,849	—	320	2,788	3,038	—	282
Fruit juices incl. 1/	5,975	6,310	—	646	328	338	—	39
froz. (1,000 hectoliters) 1/	2,243	2,589	—	240	2,079	2,597	—	262
Vegetables & preps. (mt)	—	—	—	—	—	—	—	—
Tobacco, unmanufactured (mt)	218	239	200	27	1,359	1,533	1,500	193
Cotton, excl. lintere (mt)	1,668	1,585	1,600	182	2,704	2,605	2,300	262
Seeds (mt)	556	514	—	52	573	618	700	51
Sugar, cane or beet (mt)	447	589	—	47	187	219	—	16
Oilseeds & products (mt)	23,745	21,976	—	2,384	6,099	5,607	7,200	590
Oilseeds (mt)	17,669	15,633	—	1,774	4,239	3,811	—	418
Soybeans (mt)	17,229	15,139	18,800	1,722	3,942	3,465	4,200	388
Protein meal (mt)	4,780	5,292	—	480	1,032	1,073	—	98
Vegetable oils (mt)	1,296	1,051	—	131	829	723	—	77
Essential oils (mt)	14	13	—	1	182	183	—	16
Other	91	92	—	7	2,115	2,441	—	231
Total	147,583	133,219	140,000	11,828	40,220	37,609	41,000	3,739
IMPORTS								
Animals, live (no.) 1/	2,938	3,168	—	277	1,053	1,131	1,200	132
Meats & preps., excl. poultry (mt)	1,142	1,191	—	96	2,848	3,016	—	227
Beef & veal (mt)	754	811	722	68	1,842	2,024	2,100	164
Pork (mt)	340	322	340	22	888	868	800	51
Dairy products (mt) 1/	255	231	—	15	951	807	800	54
Poultry & products 1/	—	—	—	—	129	119	—	10
Fats, oils, & greases (mt)	19	33	—	4	15	19	—	2
Hides & skins, incl. furskins 1/	—	—	—	—	182	153	—	16
Wool, unmanufactured (mt)	47	50	—	4	187	175	—	13
Grains & feeds (mt)	3,481	4,183	4,650	478	1,181	1,271	1,300	127
Fruits, nuts, & preps., excl. juices (mt)	5,331	5,648	5,660	641	2,486	2,740	—	316
Bananas & plantains (mt)	3,238	3,397	3,400	349	926	992	1,100	112
Fruit juices (1,000 hectoliters) 1/	33,933	27,948	30,000	2,135	1,002	737	—	74
Vegetables & preps. (mt)	2,243	2,180	—	255	2,264	2,185	2,200	220
Tobacco, unmanufactured (mt)	193	215	220	19	588	698	800	54
Cotton, unmanufactured (mt)	30	18	—	1	20	16	—	1
Seeds (mt)	171	169	150	38	164	173	200	30
Nursery stock & cut flowers 1/	—	—	—	—	519	538	—	39
Sugar, cane or beet (mt)	1,769	1,785	—	104	734	717	—	38
Oilseeds & products (mt)	2,016	2,077	—	207	964	959	1,100	98
Oilseeds (mt)	534	445	—	37	206	151	—	12
Protein meal (mt)	310	412	—	61	48	57	—	8
Vegetable oils (mt)	1,171	1,220	—	109	710	750	—	78
Beverages excl. fruit 1/	13,543	12,987	—	1,079	1,867	1,858	—	156
juices (1,000 hectoliters) 1/	—	—	—	—	—	—	—	—
Coffee, tea, cocoa, spices	2,202	2,025	2,250	217	3,485	3,280	—	322
Coffee, incl. products (mt)	1,290	1,116	1,250	131	1,997	1,831	1,800	181
Cocoa beans & products (mt)	698	680	790	62	1,042	1,005	1,100	94
Rubber & allied gums (mt)	840	792	890	86	712	664	700	69
Other	—	—	—	—	1,229	1,332	—	136
Total	—	—	—	—	22,560	22,588	22,000	2,132

*Fiscal years begin Oct. 1 & end Sept. 30. Fiscal year 1991 began Oct. 1, 1990 & ended Sept. 30, 1991. 1/ Not included in total volume and also other dairy products for 1989 & 1990. 2/ Forecasts for footnoted items 2/-6/ are based on slightly different groups of commodities. Fiscal 1990 exports of categories used in the 1991 forecasts were 2/ 676,000 m. tons. 3/ 16,014 million. 4/ 4,426 million i.e. includes flour. 5/ 11,065 million m. tons. 6/ Less than \$500. F = forecast. — = not available.

Information contact: Stephen MacDonald (202) 219-0822.

Table 28.—U.S. Agricultural Exports by Region

Region & country	Fiscal year*			Mar	Change from year* earlier			Mar
	1990	1991	1992 F	1992	1990	1991	1992 F	1992
	\$ million				Percent			
WESTERN EUROPE	7,309	7,312	7,000	725	4	0	4	2
European Community (EC-12)	6,815	6,776	7,100	680	4	-1	4	4
Belgium-Luxembourg	426	464	—	43	-1	9	—	-10
France	489	571	—	57	-1	22	—	12
Germany	1,096	1,135	—	99	17	4	—	-18
Italy	702	675	—	51	15	-4	—	-7
Netherlands	1,636	1,561	—	163	-11	-5	—	29
United Kingdom	760	883	—	66	3	16	—	-6
Portugal	338	251	—	13	10	-26	—	-14
Spain, incl. Canary Islands	976	855	—	152	15	-12	—	19
Other Western Europe	493	536	500	45	-3	9	0	-20
Switzerland	171	194	—	22	3	13	—	-15
EASTERN EUROPE	533	306	200	14	35	-43	-33	-52
Poland	101	46	—	2	124	-54	—	-61
Yugoslavia	129	74	—	2	69	-43	—	-61
Romania	210	82	—	6	239	-61	—	-17
Former USSR	3,006	1,758	2,700	182	-9	-42	50	-50
ASIA	18,174	16,094	17,400	1,548	-3	-11	8	1
West Asia (Mideast)	1,996	1,430	1,700	143	-12	-28	21	-6
Turkey	280	224	—	39	9	-14	—	53
Iraq	497	0	0	0	-37	-100	0	0
Israel, incl. Gaza & W. Bank	285	287	—	35	-14	1	—	-8
Saudi Arabia	502	538	600	41	4	7	20	16
South Asia	723	375	—	37	-38	-48	—	69
Bangladesh	120	67	—	12	-44	-44	—	2
India	116	95	—	6	-52	-18	—	-31
Pakistan	391	144	200	7	-35	-63	100	769
China	909	668	900	85	-39	-27	29	-15
Japan	8,155	7,736	8,100	718	0	-5	5	2
Southeast Asia	1,184	1,239	—	143	21	5	—	6
Indonesia	277	279	—	44	28	1	—	3
Philippines	351	373	400	35	2	8	0	22
Other East Asia	5,206	4,646	4,900	421	13	-11	7	0
Taiwan	1,819	1,739	1,900	146	14	-4	12	-11
Korea, Rep.	2,701	2,159	2,200	202	10	-20	5	1
Hong Kong	685	745	800	73	19	9	14	31
AFRICA	2,011	1,884	1,900	199	-12	-6	0	12
North Africa	1,527	1,388	1,200	123	-15	-9	-14	-4
Morocco	164	129	—	8	-24	-21	—	-47
Algeria	491	479	500	29	-11	-2	0	-10
Egypt	763	692	600	66	-20	-9	-14	-15
Sub-Saharan	484	496	700	76	0	2	40	53
Nigeria	32	44	—	3	7	37	—	-55
Rep. S. Africa	81	74	—	28	43	-9	—	201
LATIN AMERICA & CARIBBEAN	5,155	5,500	6,100	618	-5	7	4	39
Brazil	105	271	200	6	-30	159	-33	17
Caribbean Islands	1,008	1,010	—	84	0	0	—	-2
Central America	463	497	—	44	3	7	—	3
Colombia	147	124	—	18	6	-16	—	286
Mexico	2,666	2,884	3,400	400	-3	8	17	51
Peru	187	150	—	17	132	-20	—	224
Venezuela	345	307	400	22	-41	-11	33	37
CANADA	3,715	4,409	4,700	424	70	19	7	21
OCEANIA	317	346	400	29	18	9	33	15
TOTAL	40,220	37,609	41,000	3,739	2	-6	9	3
Developed countries	19,805	20,104	21,200	1,955	10	2	6	7
Developing countries	15,966	14,769	16,000	1,699	-3	-7	9	0
Other countries	4,448	2,736	3,800	85	-15	-38	41	-15

*Fiscal years begin Oct. 1 & end Sept. 30. Fiscal year 1991 began Oct. 1, 1990 & ended Sept. 30, 1991. F = forecast. — = not available.
 Note: Adjusted for transshipments through Canada.

Information contact: Stephen MacDonald (202) 219-0822.

Farm Income

Table 29.—Farm Income Statistics

	Calendar year										
	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991 F	1992 F
	\$ billion										
1. Farm receipts	147.8	141.9	147.7	150.1	140.2	148.3	157.3	168.0	175.8	175	164 to 169
Crops (incl. net CCC loans)	72.3	67.2	69.9	74.3	63.7	65.8	71.6	78.8	80.4	82	81 to 84
Livestock	70.3	69.6	72.9	69.8	71.6	76.0	79.4	84.1	89.8	88	83 to 85
Farm related 1/	5.2	5.1	4.9	6.0	5.7	6.5	6.3	8.1	6.7	7	6 to 8
2. Direct Government payments	3.5	9.3	8.4	7.7	11.8	10.7	14.5	10.9	9.3	8	8 to 9
Cash payments	3.5	4.1	4.0	7.0	8.1	6.6	7.1	9.1	8.4	8	8 to 9
Value of PIK commodities	0.0	5.2	4.5	0.1	3.7	10.1	7.4	1.7	0.9	0	0 to 1
3. Gross cash income (1+2) 2/	151.3	151.1	156.1	157.9	152.8	165.1	171.9	179.9	186.0	183	179 to 188
4. Nonmoney income 3/	14.3	13.6	5.9	5.8	5.5	5.6	6.1	6.1	6.3	6	5 to 7
5. Value of inventory change	-1.4	-10.9	6.0	-2.3	-2.2	-2.3	-3.5	4.3	2.9	-1	1 to 4
6. Total gross farm income (3+4+5)	164.1	153.9	168.0	161.2	156.1	168.4	174.6	190.3	195.1	188	187 to 194
7. Cash expenses 4/	113.2	112.8	118.7	110.7	105.0	109.8	114.5	120.5	124.2	125	125 to 130
8. Total expenses	140.3	139.6	141.9	132.4	125.1	128.7	133.9	140.2	144.3	146	146 to 151
9. Net cash income (4-7)	38.1	38.4	37.4	47.1	47.8	55.3	57.4	59.4	61.8	58	51 to 58
10. Net farm income (3-8)	23.8	14.2	26.1	28.8	31.0	39.7	40.0	50.1	50.8	42	37 to 45
Deflated (1987\$)	26.5	19.3	28.7	30.5	32.0	39.7	39.1	46.2	45.0	36	31 to 38

1/ Income from machine hire, custom work, sales of forest products, & other miscellaneous cash sources. 2/ Numbers in parentheses indicate the combination of items required to calculate a given item. 3/ Value of home consumption of self-produced food & imputed gross rental value of farm dwellings. 4/ Excludes capital consumption, perquisites to hired labor, & farm household expenses. Total may not add because of rounding. F = forecast.

Information contact: Robert McElroy (202) 219-0800.

Table 30.—Balance Sheet of the U.S. Farming Sector

	Calendar year 1/										
	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991 F	1992 F
	\$ billion										
Assets											
Real estate	750.0	753.4	661.7	588.1	542.2	578.9	595.5	615.1	620	622	620 to 630
Non-real estate	195.6	191.9	196.9	187.4	182.3	193.9	205.6	214.6	222.0	224	221 to 231
Livestock & poultry	53.0	49.5	49.5	46.3	47.8	58.0	62.2	66.2	70.9	68	70 to 74
Machinery & motor vehicles	66.0	85.8	85.0	82.9	81.5	80.0	82.0	85.8	87.4	89	88 to 92
Crops stored 2/	26.4	24.4	26.3	22.9	18.6	17.8	22.7	23.3	22.4	23	20 to 24
Purchased inputs	—	—	2.0	1.2	2.1	3.0	3.3	2.7	2.8	3	2 to 4
Financial assets	29.7	30.9	32.6	33.3	34.5	35.1	35.4	36.6	38.5	40	39 to 43
Total farm assets	945.1	944.0	857.1	772.6	724.6	772.8	801.1	829.7	850.0	846	845 to 855
Liabilities											
Real estate debt 3/	101.8	103.2	106.7	100.1	90.4	82.4	77.6	75.3	73.4	75	73 to 77
Non-real estate debt 4/	87.0	87.9	87.1	77.5	66.6	62.0	61.7	61.8	63.1	64	63 to 87
Total farm debt	188.8	191.1	193.8	177.6	157.0	144.4	139.4	137.1	136.5	139	137 to 143
Total farm equity	756.3	752.9	663.3	595.0	567.6	628.4	661.7	692.6	713.5	707	710 to 720
	Percent										
Selected ratios											
Debt-to-assets	20.0	20.2	22.6	23.0	21.7	18.7	17.4	16.5	16.1	16	16 to 17
Debt-to-equity	25.0	25.4	29.2	29.8	27.7	23.0	21.1	19.6	19.1	20	19 to 20
Debt-to-net cash income	496	498	518	377	328	261	243	231	221	241	250 to 260

1/ As of Dec. 31. 2/ Non-CCC crops held on farms plus value above loan rates for crops held under CCC. 3/ Excludes debt on operator dwellings, but includes CCC storage and drying facilities loans. 4/ Excludes debt for nonfarm purposes. F = forecast.

Information contacts: Ken Erickson or Jim Ryan (202) 219-0798.

Table 31.—Cash Receipts From Farm Marketings, by State

Region & State	Livestock & products				Crops 1/				Total 1/			
	1990	1991	Feb 1992	Mar 1992	1990	1991	Feb 1992	Mar 1992	1990	1991	Feb 1991	Mar 1992
	\$ million 2/											
NORTH ATLANTIC												
Maine	220	215	20	20	240	203	19	18	460	418	39	37
New Hampshire	63	63	6	6	71	70	6	8	134	133	11	13
Vermont	398	365	33	33	49	51	3	8	447	416	36	41
Massachusetts	116	116	10	11	303	337	12	17	418	453	22	28
Rhode Island	13	13	1	1	58	58	3	5	71	71	4	6
Connecticut	196	193	17	17	250	253	13	18	446	446	29	36
New York	1,983	1,766	144	151	1,023	1,067	61	76	3,006	2,833	204	227
New Jersey	196	199	15	17	452	464	17	27	647	663	33	43
Pennsylvania	2,714	2,478	217	214	1,053	1,009	83	85	3,767	3,487	299	300
NORTH CENTRAL												
Ohio	1,836	1,662	114	131	2,335	2,285	135	139	4,172	3,946	249	270
Indiana	2,060	1,892	136	131	2,871	2,596	196	125	4,931	4,488	332	255
Illinois	2,477	2,288	156	169	5,461	5,198	412	374	7,938	7,486	568	544
Michigan	1,398	1,277	98	97	1,785	1,787	124	119	3,183	3,064	222	215
Wisconsin	4,581	4,162	331	342	1,125	1,175	60	57	5,706	5,337	392	399
Minnesota	3,758	3,485	255	277	3,253	3,386	127	132	7,011	6,871	383	409
Iowa	5,882	5,502	427	396	4,437	4,539	322	285	10,319	10,040	749	681
Missouri	2,271	2,155	183	175	1,668	1,673	110	90	3,939	3,828	293	265
North Dakota	813	803	46	43	1,724	1,819	125	140	2,537	2,722	171	183
South Dakota	2,313	2,239	190	173	1,036	1,089	58	60	3,349	3,327	248	233
Nebraska	6,037	5,950	511	422	2,808	2,851	171	177	8,845	8,901	682	599
Kansas	4,896	4,731	399	460	2,099	2,123	162	159	6,995	6,854	561	619
SOUTHERN												
Delaware	460	431	33	37	184	175	9	8	644	605	42	45
Maryland	828	785	63	85	517	509	26	37	1,345	1,295	89	103
Virginia	1,379	1,352	100	111	741	728	28	30	2,120	2,078	128	141
West Virginia	269	267	16	20	70	74	4	3	338	342	20	23
North Carolina	2,853	2,544	181	191	2,214	2,272	56	63	4,887	4,816	237	254
South Carolina	577	558	40	41	599	674	23	24	1,176	1,231	64	65
Georgia	2,268	2,064	169	173	1,574	1,828	49	64	3,842	3,892	218	235
Florida	1,260	1,200	94	93	4,448	4,838	504	621	5,708	6,036	597	714
Kentucky	1,698	1,632	103	101	1,400	1,480	94	37	3,098	3,112	197	138
Tennessee	1,111	1,051	95	99	928	970	45	33	2,039	2,021	140	132
Alabama	2,083	2,010	228	212	655	753	34	36	2,737	2,763	261	249
Mississippi	1,322	1,291	98	100	1,111	1,191	52	38	2,433	2,482	150	137
Arkansas	2,706	2,575	189	207	1,553	1,836	77	53	4,259	4,410	267	259
Louisiana	637	617	46	48	1,284	1,281	57	28	1,921	1,879	102	74
Oklahoma	2,363	2,382	298	350	1,191	1,049	62	52	3,554	3,431	360	403
Texas	7,712	7,693	612	707	4,268	4,496	200	182	11,981	12,189	812	889
WESTERN												
Montana	864	854	56	57	742	746	66	78	1,606	1,600	122	135
Idaho	1,154	1,099	91	97	1,781	1,586	70	78	2,935	2,685	161	178
Wyoming	610	618	37	43	157	162	7	7	767	777	45	50
Colorado	3,029	2,906	214	212	1,184	1,099	63	70	4,213	4,005	278	283
New Mexico	1,046	1,026	83	86	483	477	16	18	1,529	1,503	99	104
Arizona	819	823	52	60	1,046	1,206	49	149	1,865	2,029	101	209
Utah	576	555	43	46	179	167	10	13	755	722	53	60
Nevada	218	218	17	18	115	93	6	8	333	311	23	24
Washington	1,396	1,318	101	107	2,420	2,698	197	169	3,816	4,018	298	295
Oregon	755	751	62	65	1,557	1,548	86	93	2,312	2,297	146	158
California	5,515	5,474	366	415	13,344	13,370	575	869	18,859	18,843	941	1,284
Alaska	8	8	1	1	19	19	1	1	27	27	2	2
Hawaii	88	89	7	8	499	489	37	42	588	578	44	50
UNITED STATES	89,623	85,742	6,804	7,051	80,364	82,002	4,722	5,040	169,987	167,743	11,525	12,091

1/ Sales of farm products include receipts from commodities placed under nonrecourse CCC loans, plus additional gains realized on redemptions during the period. 2/ Estimates as of end of current month. Totals may not add because of rounding.

Information contact: Roger Strickland (202) 219-0806.

Table 32.—Cash Receipts From Farming

	Annual						1991			1992		
	1986	1987	1988	1989	1990	1991	Mar	Nov	Dec	Jan	Feb	Mar
	\$ million											
Farm marketings & CCC loans*	135,303	141,759	151,082	160,893	169,987	167,743	12,202	17,899	15,298	14,628	11,525	12,091
Livestock & products	71,653	75,994	79,437	84,131	89,623	85,742	7,170	7,438	7,605	6,976	6,804	7,051
Meat animals	39,081	44,478	46,492	46,857	51,677	50,325	4,211	4,285	4,326	4,069	4,120	4,153
Dairy products	17,724	17,727	17,641	19,398	20,199	18,321	1,490	1,588	1,810	1,608	1,487	1,581
Poultry & eggs	12,701	11,516	12,868	15,372	15,270	14,641	1,296	1,254	1,306	1,105	1,032	1,134
Other	2,048	2,274	2,438	2,507	2,477	2,455	172	313	163	196	164	182
Crops	63,749	65,784	71,645	76,761	80,384	82,002	5,033	10,461	7,694	7,850	4,722	5,040
Food grains	5,741	5,776	7,467	8,247	7,876	7,260	390	682	584	789	555	507
Feed crops	16,911	14,576	14,298	17,061	18,116	19,278	1,201	2,627	1,536	2,388	1,243	1,157
Cotton (lint & seed)	3,371	4,189	4,546	5,040	5,234	6,006	262	1,017	1,147	805	212	106
Tobacco	1,894	1,816	2,083	2,418	2,736	2,898	1	188	692	452	38	8
Oil-bearing crops	10,614	11,283	13,600	11,868	12,403	12,597	587	1,675	786	1,164	762	588
Vegetables & melons	8,665	9,902	9,787	11,461	11,533	11,799	1,050	552	467	787	854	1,179
Fruits & tree nuts	7,252	8,062	9,204	9,257	9,306	9,856	483	1,357	1,128	652	817	490
Other	9,101	10,161	10,760	11,415	12,160	12,308	1,059	1,762	1,373	752	741	1,007
Government payments	11,813	16,747	14,480	10,887	9,298	8,214	1,764	326	1,390	72	822	1,580
Total	147,116	168,506	165,562	171,780	179,285	175,957	13,968	18,224	16,688	14,698	12,347	13,671

* Sales of farm products include receipts from commodities placed under nonrecourse CCC loans, plus additional gains realized on redemptions during the period.

Information contact: Roger Strickland (202) 219-0806.

Table 33.—Farm Production Expenses

	Calendar year									
	1983	1984	1985	1986	1987	1988	1989	1990	1991 F	1992 F
	\$ million									
Feed purchased	20,573	19,383	16,949	17,472	17,463	20,393	21,002	20,727	20,000	18,000 to 22,000
Livestock purchased	8,816	9,487	9,184	9,758	11,842	12,764	13,138	14,737	14,000	12,000 to 14,000
Seed purchased	2,690	3,386	3,128	3,188	3,269	3,359	3,558	3,582	4,000	3,000 to 6,000
Farm-origin inputs	32,081	32,258	29,261	30,418	32,564	36,515	37,698	39,046	38,000	36,000 to 41,000
Fertilizer & lime	7,055	8,381	7,513	6,820	6,453	6,947	7,248	7,137	7,000	6,000 to 8,000
Fuels & oils	7,211	7,298	6,436	5,310	4,957	5,091	4,983	5,951	6,000	5,000 to 7,000
Electricity	1,982	2,060	1,878	1,795	2,156	2,278	1,990	1,844	2,000	1,000 to 3,000
Pesticides	3,870	4,688	4,334	4,324	4,512	4,577	5,437	5,727	6,000	5,000 to 7,000
Manufactured inputs	20,118	22,404	20,160	18,249	18,077	18,893	19,658	20,759	21,000	20,000 to 23,000
Short-term interest	10,816	10,396	8,735	7,367	6,767	6,797	8,910	6,805	7,000	6,000 to 8,000
Real estate interest 1/	10,816	10,733	9,878	9,131	8,187	7,885	7,781	7,867	7,000	6,000 to 8,000
Total interest charges	21,430	21,129	18,613	16,498	14,954	14,682	14,691	14,472	14,000	13,000 to 15,000
Repair & maintenance 1/ 2/	6,529	6,416	6,370	6,428	6,761	6,800	7,272	7,283	8,000	7,000 to 9,000
Contract & hired labor	8,938	9,427	10,009	9,484	9,975	10,441	11,110	12,543	14,000	13,000 to 17,000
Machine hire & custom work	2,213	2,566	2,354	2,099	2,105	2,350	2,674	2,634	3,000	2,000 to 4,000
Marketing, storage, & transportation	3,904	4,012	4,127	3,652	4,078	3,450	4,080	3,972	4,000	3,000 to 5,000
Misc. operating expenses 1/	10,981	10,331	10,010	9,759	11,327	11,404	12,446	12,236	11,000	10,000 to 14,000
Other operating expenses	32,545	32,751	32,888	31,420	34,246	34,445	37,582	38,669	41,000	41,000 to 48,000
Capital consumption 1/	23,758	20,847	19,299	17,788	16,740	17,075	17,553	17,545	18,000	17,000 to 19,000
Taxes 1/	4,465	4,337	4,542	4,612	4,853	4,848	5,127	5,623	6,000	5,000 to 7,000
Net rent to nonoperator landlord	5,211	8,150	7,890	6,099	7,304	7,445	7,911	8,177	8,000	7,000 to 9,000
Other overhead expenses	33,434	33,334	31,531	28,499	28,697	29,367	30,590	31,345	32,000	30,000 to 35,000
Total production expenses	139,808	141,873	132,433	125,084	128,737	133,902	140,219	144,291	148,000	146,000 to 151,000

1/ Includes operator dwellings. 2/ Beginning in 1992, miscellaneous operating expenses include other livestock purchases & dairy assessments. Totals may not add because of rounding. F = forecast.

Information contacts: Chris McGath (202) 219-0804, Robert McElroy (202) 219-0800.

Table 34.—CCC Net Outlays by Commodity & Function

COMMODITY/PROGRAM	Fiscal year									
	1984	1985	1986	1987	1988	1989	1990	1991	1992 E	1993 E
	\$ million									
COMMODITY/PROGRAM										
Feed grains										
Corn	-934	4,403	10,524	12,348	8,227	2,863	2,450	2,387	2,635	3,620
Grain sorghum	78	463	1,185	1,203	764	467	381	243	222	300
Barley	89	336	471	394	57	45	-93	71	185	135
Oats	5	2	28	17	-2	1	-5	12	40	28
Corn & oat products	8	7	5	7	7	8	8	9	10	4
Total feed grains	-758	5,211	12,211	13,967	9,053	3,384	2,721	2,722	3,092	4,087
Wheat	2,538	4,691	3,440	2,836	678	53	806	2,858	2,211	2,329
Rice	333	890	947	908	128	631	667	867	571	720
Upland cotton	244	1,553	2,142	1,788	666	1,461	-79	382	1,281	702
Tobacco	346	455	253	-348	-453	-367	-307	-143	-86	20
Dairy	1,502	2,085	2,337	1,166	1,295	879	505	839	330	341
Soybeans	-585	711	1,597	-478	-1,676	-88	5	40	-109	42
Peanuts	1	12	32	8	7	13	1	48	-18	-6
Sugar	10	184	214	-65	-248	-25	15	-20	-28	-27
Honey	90	81	89	73	100	42	47	19	11	6
Wool	132	109	123	152	1/ 5	93	104	172	178	185
Operating expense 3/	362	348	457	535	614	820	818	825	7	7
Interest expenditure	1,064	1,435	1,411	1,219	425	98	632	745	590	300
Export programs 4/	743	134	102	276	200	-102	-34	733	1,645	1,748
1988/89 Disaster/										
livestock assistance	0	0	0	0	0	3,819	2/ 181	121	1,029	0
Other	1,295	-314	486	371	1,665	110	609	2	1,258	1,256
Total	7,315	17,683	25,841	22,408	12,481	10,523	6,471	10,110	11,966	11,710
FUNCTION										
Price-support loans (net)	-27	8,272	13,828	12,189	4,579	-928	-399	418	641	352
Direct payments 5/										
Deficiency	812	8,302	8,166	4,833	3,971	5,798	4,178	6,224	6,100	7,448
Diversion	1,504	1,525	84	382	8	-1	0	0	0	0
Dairy termination	0	0	489	587	260	168	189	96	13	0
Other	0	0	27	60	0	42	3	21	252	93
Disaster	1	0	0	0	6	4	0	0	0	0
Total direct payments	2,117	7,827	8,748	5,882	4,245	6,011	4,370	6,341	6,365	7,539
1988/89 crop disaster	0	0	0	0	0	3,388	2/ 5	6	996	0
Emergency livestock/										
forage assistance	0	0	0	0	31	533	156	115	33	0
Purchases (net)	1,470	1,331	1,870	-479	-1,131	116	-48	646	344	468
Producer storage										
payments	268	329	485	832	658	174	185	1	28	24
Processing, storage,										
& transportation	639	657	1,013	1,859	1,113	659	317	394	205	138
Operating expense 3/	362	348	457	535	614	820	818	825	7	7
Interest expenditure	1,064	1,435	1,411	1,219	425	98	632	745	590	300
Export programs 4/	743	134	102	276	200	-102	-34	733	1,645	1,748
Other	679	-648	326	305	1,727	-46	669	86	1,114	1,134
Total	7,315	17,683	25,841	22,408	12,481	10,523	6,471	10,110	11,966	11,710

1/ Fiscal 1988 wool & mohair program outlays were \$130,635,000 but include a one-time advance appropriation of \$128,108,000, which was recorded as a wool program receipt by Treasury. 2/ Approximately \$1.5 billion in benefits to farmers under the Disaster Assistance Act of 1989 were paid in generic certificates & were not recorded directly as disaster assistance outlays. 3/ Does not include CCC transfers to General Sales Manager. 4/ Includes Export Guarantee Program, Direct Export Credit Program, CCC Transfers to the General Sales Manager, Market Promotion Program, starting in fiscal 1991 & starting in fiscal 1992 Export Guarantee Program - Credit Reform, Export Enhancement Program, & Dairy Export Incentive Program. 5/ Includes cash payments only. Excludes payment-in-kind in fiscal 83-85 & generic certificates in fiscal 88-93. E = Estimated in the fiscal 1993 President's Budget based on November, 1991 supply & demand estimates. Minus (-) indicates a net receipt (excess of repayments or other receipts over gross outlays of funds).

Information contact: Richard Pazdalski (202) 720-5148.

Food Expenditures

Table 35.—Food Expenditures Estimates

	Annual			1992			1992 year-to-date		
	1989 R	1990 R	1991 R ²	Mar	Apr P	May P	Mar	Apr P	May P
\$ billion									
Sales 1/									
Off-premise use 2/	274.3	296.7	304.0	24.9	25.3	26.7	73.7	98.8	125.6
Meals & snacks 3/	206.3	218.7	227.0	19.4	19.1	20.3	55.6	74.7	95.0
1991 \$ billion									
Sales 1/									
Off-premise use 2/	299.9	304.2	304.0	24.6	25.0	26.6	73.1	98.1	124.7
Meals & snacks 3/	223.3	226.0	226.9	19.1	18.6	19.9	54.8	73.6	93.5
Percent change from year earlier (\$ bil.)									
Sales 1/									
Off-premise use 2/	7.1	8.2	2.5	-3.3	4.3	-0.5	1.8	2.4	1.8
Meals & snacks 3/	5.5	6.0	3.8	3.8	2.8	2.0	6.9	5.8	5.0
Percent change from year earlier (1991 \$ bil.)									
Sales 1/									
Off-premise use 2/	0.6	1.4	-0.1	-4.1	-4.0	0.0	1.2	1.9	1.5
Meals & snacks 3/	0.8	1.2	0.4	1.1	0.5	-0.1	4.0	3.1	2.4

1/ Food only (excludes alcoholic beverages). Not seasonally adjusted. 2/ Excludes donations & home production. 3/ Excludes donations, child nutrition subsidies, & meals furnished to employees, patients, & inmates. P = preliminary. R = revised.

NOTE: This table differs from Personal Consumption Expenditures (PCE), table 2, for several reasons: (1) this series includes only food not alcoholic beverages & pet food which are included in PCE; (2) this series is not seasonally adjusted, whereas PCE is seasonally adjusted at annual rates; (3) this series reports sales only, but PCE includes food produced & consumed on farms & food furnished to employees; (4) this series includes all sales of meals & snacks. PCE includes only purchases using personal funds, excluding business travel & entertainment. For a more complete discussion of the differences, see "Developing an Integrated Information System for the Food Sector," Agr.-Econ. Rpt. No. 575, Aug 1987.

Information contact: Alden Manchester (202) 219-0880.

Transportation

Table 36.—Rail Rates; Grain & Fruit-Vegetable Shipments

	Annual			1991			1992			
	1989	1990	1991	Apr	Nov	Dec	Jan	Feb	Mar	Apr
Rail freight rate index 1/ (Dec. 1984=100)										
All products	108.4	107.5	109.3	109.5	109.4	109.3	109.3	109.3 P	109.8 P	109.9 P
Farm products	108.4	110.4	111.4	112.4	111.0	111.0	111.1	111.1 P	110.3 P	110.5 P
Grain	108.7	110.1	111.2	112.0	111.3	111.3	111.3	111.3 P	110.2 P	110.5 P
Food products	103.9	105.4	106.1	108.3	108.3	108.3	108.6	108.6 P	109.3 P	109.4 P
Grain shipments										
Rail carloadings (1,000 cars) 2/	28.4	27.6	26.4	24.9	27.3 P	28.8 P	29.0 P	30.0 P	30.0 P	26.6 P
Barge shipments (mil. ton) 3/	3.3	3.8	3.3	4.0	3.7	2.9	1.8	2.0	3.4	3.8
Fresh fruit & vegetable shipments 4/ 5/										
Piggy back (mil. cwt)	2.2	1.8	1.5	1.1	1.3	1.3	1.5	1.4	1.5	1.8
Rail (mil. cwt)	2.6	2.3	2.1	1.4	2.8	2.8	3.1	2.7	2.6	2.8
Truck (mil. cwt)	42.3	41.5	41.9	42.5	43.8	40.3	40.6	41.5	43.7	50.8
Cost of operating trucks hauling produce 4/										
Fleet operation (cts./mile)	123.4	130.5	126.5	128.1	124.9	124.0	122.6	122.7	122.8	123.3

1/ Department of Labor, Bureau of Labor Statistics. 2/ Weekly average; from Association of American Railroads. 3/ Shipments on Illinois & Mississippi waterways. U.S. Corps of Engineers. 4/ Agricultural Marketing Service, USDA. 5/ Preliminary data for 1992. P = preliminary.

Information contact: T.Q. Hutchinson (202) 219-0840.

Indicators of Farm Productivity

Table 37.—Indexes of Farm Production, Input Use & Productivity ^{1/}

	1982	1983	1984	1985	1986	1987	1988	1989	1990 2/	1991 2/
	1977=100									
Farm output	116	96	112	118	111	110	102	114	119	120
All livestock products 3/	107	109	107	110	110	113	116	116	118	119
Meat animals	101	104	101	102	100	102	105	104	104	104
Dairy products	110	114	110	117	116	118	118	117	120	121
Poultry & eggs	119	120	123	128	133	144	148	153	162	168
All crops 4/	117	88	111	118	109	108	92	107	114	111
Feed grains	122	67	116	134	123	106	73	108	112	106
Hay & forage	109	100	107	106	106	102	89	101	102	103
Food grains	138	117	129	121	107	107	98	107	136	104
Sugar crops	96	93	95	97	106	111	105	105	107	112
Cotton	85	55	91	94	69	103	107	86	109	122
Tobacco	104	75	90	81	63	62	72	71	84	87
Oil crops	121	91	106	117	110	108	89	106	107	114
Cropland used for crops	101	88	99	98	94	88	87	90	90	—
Crop production per acre	116	100	112	120	116	123	106	119	127	—
Farm input 5/	98	96	95	91	89	89	87	87	88	—
Farm real estate	102	101	99	97	96	95	94	93	93	—
Mechanical power & machinery	89	86	85	80	77	74	74	73	71	—
Agricultural chemicals	118	102	120	115	109	111	112	119	122	—
Feed, seed, & livestock purchases	107	103	103	102	109	118	111	113	113	—
Farm output per unit of input	119	100	118	129	124	124	116	130	135	—
Output per hour of labor										
Farm 6/	125	99	121	139	139	142	135	147	142	—
Nonfarm 7/	99	102	105	106	108	109	111	112	111	—

1/ For historical data & indexes, see Economic Indicators of the Farm Sector: Production & Efficiency Statistics, 1986, ECIFS 5-6. 2/ Preliminary indexes for 1991 based on Crop Production: 1991 Summary, released in January 1992, & unpublished data from the Agricultural Statistics Board, NASS. 3/ Gross livestock production includes minor livestock products not included in the separate groups shown. It cannot be added to gross crop production to compute farm output. 4/ Gross crop production includes some miscellaneous crops not in the separate groups shown. It cannot be added to gross livestock production to compute farm output. 5/ Includes other items not included in the separate groups shown. 6/ Economic Research Service. 7/ Bureau of Labor Statistics. — = not available.

Information contact: George Douvelis (202) 219-0432.

Food Supply & Use

Table 38.—Per Capita Consumption of Major Food Commodities ^{1/}

Commodity	1983	1984	1985	1986	1987	1988	1989	1990 ^{2/}
	Pounds							
Red meats ^{3/4/5/}	123.9	123.7	124.9	122.2	117.4	119.5	115.9	112.4
Beef	74.1	73.8	74.6	74.4	69.5	68.6	65.4	63.9
Veal	1.4	1.5	1.5	1.6	1.3	1.1	1.0	0.9
Lamb & mutton	1.1	1.1	1.1	1.0	1.0	1.0	1.1	1.1
Pork	47.4	47.2	47.7	45.2	45.6	48.8	48.4	46.4
Poultry ^{3/4/5/}	42.6	43.7	45.2	47.1	50.7	51.7	53.6	55.4
Chicken	33.9	35.0	36.1	37.0	39.1	39.3	40.5	41.5
Turkey	8.7	8.7	9.1	10.2	11.6	12.4	13.1	13.8
Fish & shellfish ^{4/}	13.3	14.1	15.0	15.4	16.1	15.1	15.6	15.0
Eggs ^{5/}	33.0	33.0	32.4	32.2	32.2	31.2	29.9	29.6
Dairy products								
Cheese (excluding cottage) ^{3/6/}	20.6	21.5	22.5	23.1	24.1	23.7	23.8	24.7
American	11.6	11.9	12.2	12.1	12.4	11.5	11.0	11.1
Italian	5.3	5.8	6.5	7.0	7.6	8.1	8.5	9.1
Other cheese ^{7/}	3.7	3.9	3.9	4.0	4.1	4.1	4.3	4.4
Cottage cheese	4.1	4.1	4.1	4.1	3.9	3.9	3.6	3.4
Beverage milks ^{3/}	226.4	227.2	229.7	228.6	226.5	222.3	224.3	221.6
Fluid whole milk ^{8/}	130.3	126.8	123.3	116.5	111.9	105.7	97.6	90.3
Fluid lowfat milk ^{9/}	85.6	88.8	93.7	98.6	100.6	100.5	106.5	108.3
Fluid skim milk	10.6	11.6	12.6	13.5	14.0	19.1	20.2	22.9
Fluid cream products ^{10/}	5.7	6.2	6.7	7.0	7.1	7.1	7.3	7.1
Yogurt (excluding frozen)	3.3	3.7	4.1	4.4	4.4	4.7	4.3	4.1
Ice cream	18.1	18.2	18.1	18.4	18.3	17.3	16.1	15.7
Ice milk	6.9	7.0	6.9	7.2	7.4	8.0	8.4	7.7
Frozen yogurt	—	—	—	—	—	—	2.0	2.8
All dairy products, milk equivalent, milkfat basis ^{11/}	572.9	581.9	593.7	591.5	601.3	583.2	565.3	570.7
Fats & oils — Total fat content	60.0	58.8	64.3	64.3	62.9	63.0	61.1	62.7
Butter & margarine (product weight)	15.3	15.3	15.7	16.0	15.2	14.8	14.6	15.3
Shortening	18.5	21.3	22.9	22.1	21.4	21.5	21.5	22.2
Lard & edible tallow (direct use)	4.2	3.8	3.7	3.5	2.7	2.6	2.7	3.0
Salad & cooking oils	23.6	19.9	23.5	24.2	25.4	25.8	24.0	24.2
Fresh fruits ^{12/}	93.2	91.7	89.3	95.9	101.1	99.2	99.2	92.3
Canned fruit ^{13/}	12.8	12.3	12.7	12.9	13.6	13.3	13.4	13.4
Dried fruit	2.5	2.5	2.6	2.7	2.6	2.9	3.2	3.2
Frozen fruit	2.9	3.0	3.3	3.6	3.9	3.8	4.6	4.3
Frozen citrus juices ^{14/}	41.7	35.7	40.5	43.2	40.2	40.1	34.3	27.2
Vegetables ^{12/}								
Fresh	92.6	100.3	100.2	99.3	105.7	109.6	112.9	111.0
Canning	85.2	90.9	87.8	87.9	87.8	83.5	90.7	93.3
Freezing	14.6	17.5	17.1	15.6	16.8	18.3	17.8	18.1
Potatoes, all ^{12/}	118.4	121.9	122.4	125.7	125.7	122.2	126.7	127.2
Sweet potatoes ^{12/}	4.6	4.9	5.4	4.4	4.4	4.1	4.1	4.7
Peanuts (shelled)	5.9	6.0	6.3	6.4	6.4	6.9	7.0	6.0
Tree nuts (shelled)	2.2	2.3	2.3	2.3	2.2	2.3	2.3	2.5
Flour & cereal products ^{15/}	149.1	150.4	157.5	163.7	172.5	174.3	174.9	183.0
Wheat flour	117.7	119.2	124.7	125.7	129.9	130.0	129.2	135.7
Rice (milled basis)	9.9	8.5	9.0	11.6	14.0	14.3	15.2	16.2
Caloric sweeteners ^{16/}	124.3	127.0	131.3	129.6	133.7	135.1	136.4	139.1
Coffee (green bean equiv.)	10.1	10.2	10.5	10.5	10.2	9.8	10.3	10.2
Cocoa (chocolate liquor equiv.)	3.2	3.4	3.7	3.8	3.9	3.8	3.9	4.2

^{1/} In pounds, retail weight unless otherwise stated. Consumption normally represents total supply minus exports, nonfood use, & ending stocks. Calendar-year data except fresh citrus fruits, peanuts, tree nuts, & rice, which are on crop-year basis. ^{2/} Preliminary. ^{3/} Total may not add due to rounding. ^{4/} Boneless, trimmed weight. ^{5/} Excludes shipments to the U.S. territories. ^{6/} Natural equivalent of cheese & cheese products. Total product weight is greater than natural equivalent because processed cheese & cheese food are made from natural cheese & other dairy products. Includes miscellaneous cheese not shown separately. ^{7/} Includes Swiss, Brick, Munster, cream, Neufchatel, Blue, Gorgonzola, Edam, & Gouda. ^{8/} Plain & flavored. ^{9/} Plain & flavored & buttermilk. ^{10/} Heavy cream, light cream, half & half, & sour cream & dip. ^{11/} Includes condensed & evaporated milk & dry milk products. ^{12/} Farm weight. ^{13/} Excludes pineapple & berries. ^{14/} Single strength equivalent. ^{15/} Includes rye, corn, oat, & barley products. Excludes quantities used in alcoholic beverages, corn sweeteners, & fuel. ^{16/} Dry weight equivalent. — = Not available.

Information contact: Judy Jones Putnam (202) 219-0870.

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